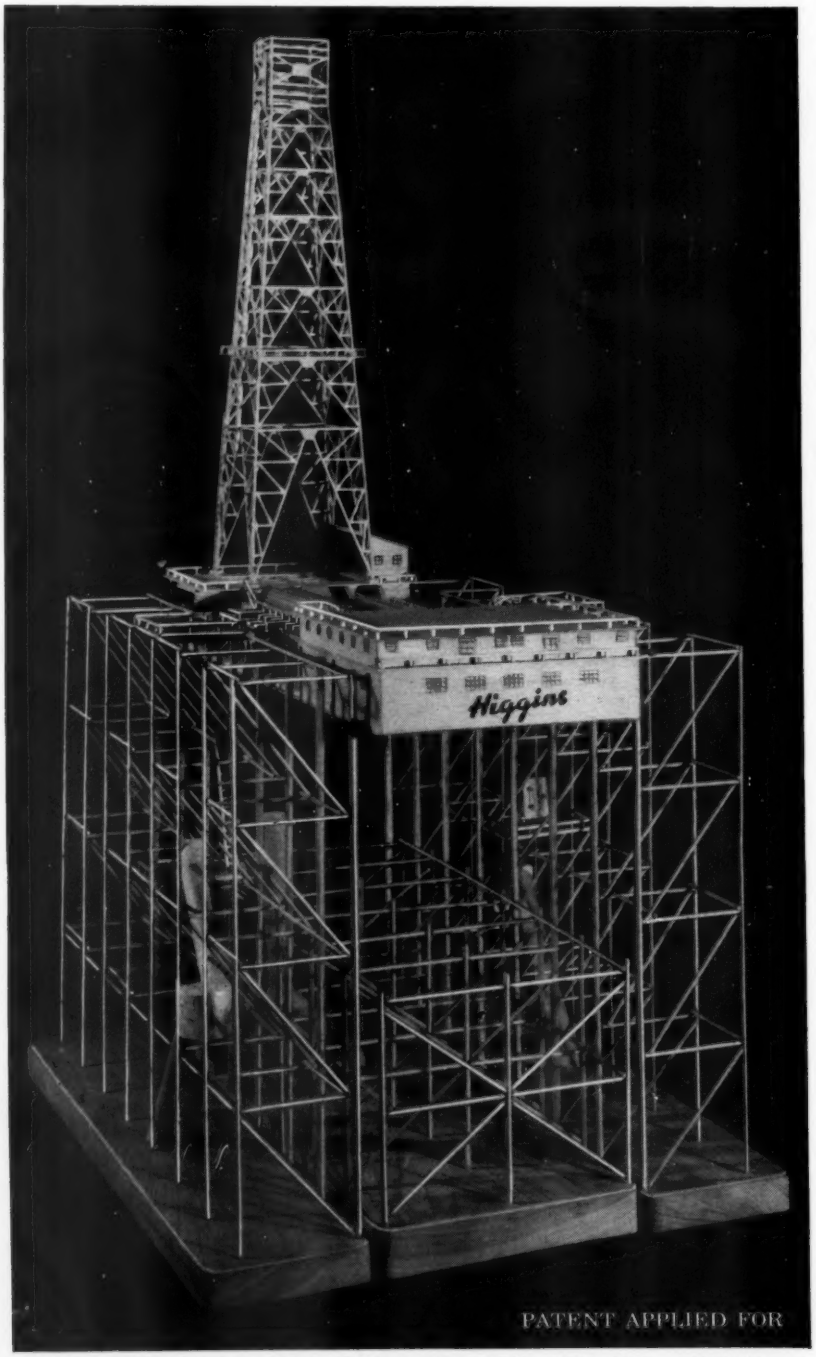
Offshore

The Marine Oil OPERATIONS Journal

LARGEST OFFSHORE OILFIELD
See Page 11

Thirty-five Cents FIRST IN THE FIELD! July, 1955

Newest Submersible Unit Designed for Deep Water Drilling



As drilling operations go deeper and deeper the problem of stability in drilling structures increases. Now Higgins has designed a deep water submersible rig with eight advantages:

1 Simplified construction reduces initial and maintenance costs.

2 Ample clearance above mean gulf level permits operation under adverse conditions.

3 Utmost stability, even during lowering and raising operations, makes for greater operating safety.

4 Suitable spread footing offers sufficient resistance to movement from external forces.

5 Large bearing area permits variation of bottom pressure to offset soil limitations in certain areas.

6 Integrated units permit ease of transportation through locks, bridges and channels.

7 Supply handling simplified to save time and thus further reduce operating costs.

8 Makes possible the use of shallow-water drilling barges for deep-water operations.

Whatever your marine problem, large, small, simple or complicated, remember that Higgins is ready to deliver the job *right* on time!

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Cover courtesy Creole Petroleum Corporation
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Bert Brandt — Page 19
The California Company — Page 26
Continental Oil Company — Page 38
Creole Petroleum Corporation — Pages 11, 12, 15
Humble Oil & Refining Company — Page 28
Shell Oil Company — Pages 50, 51

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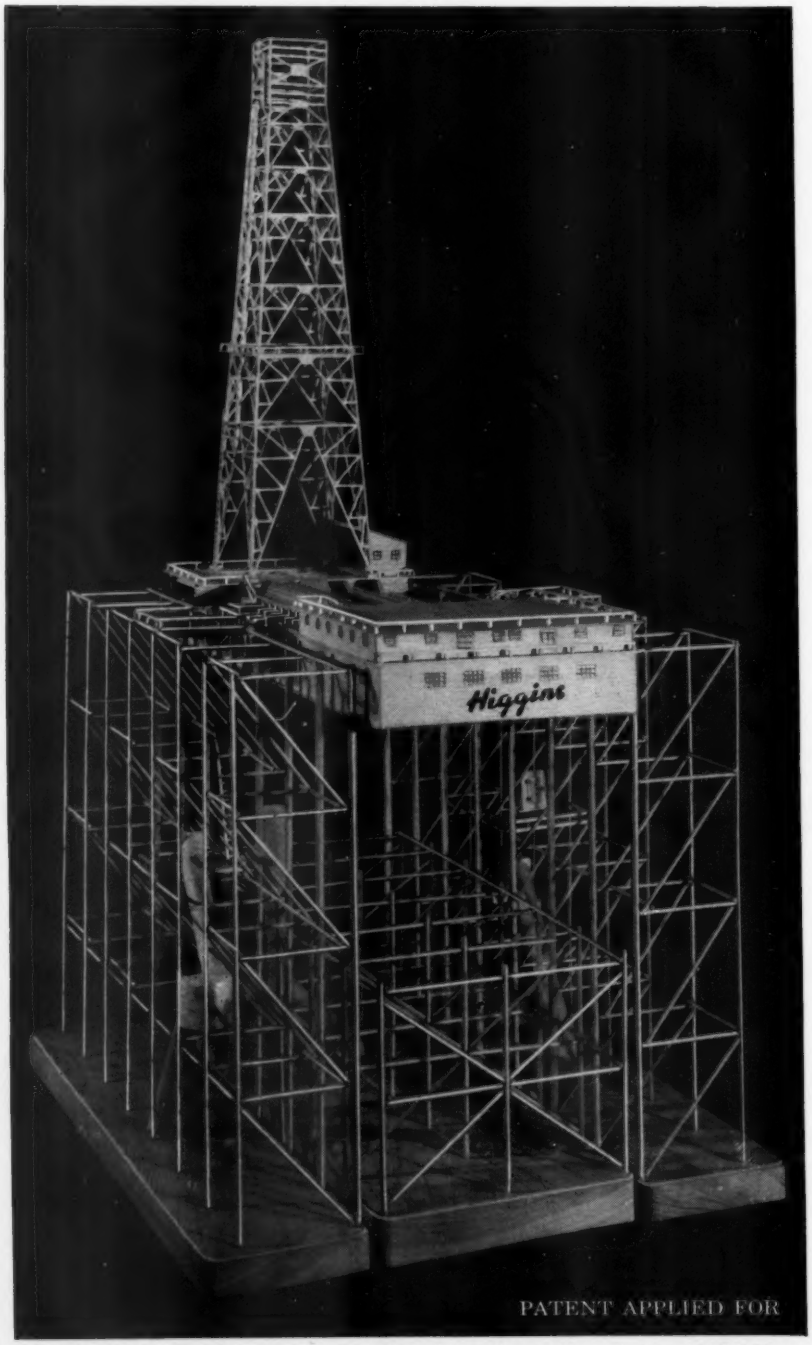

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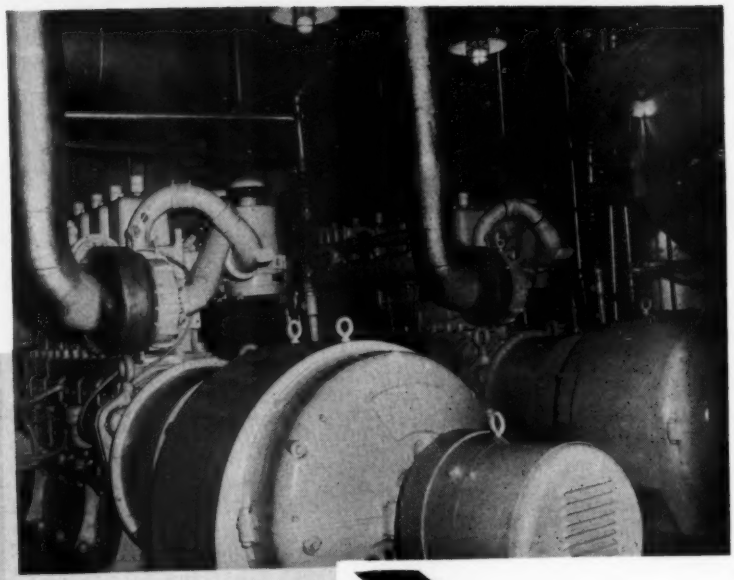
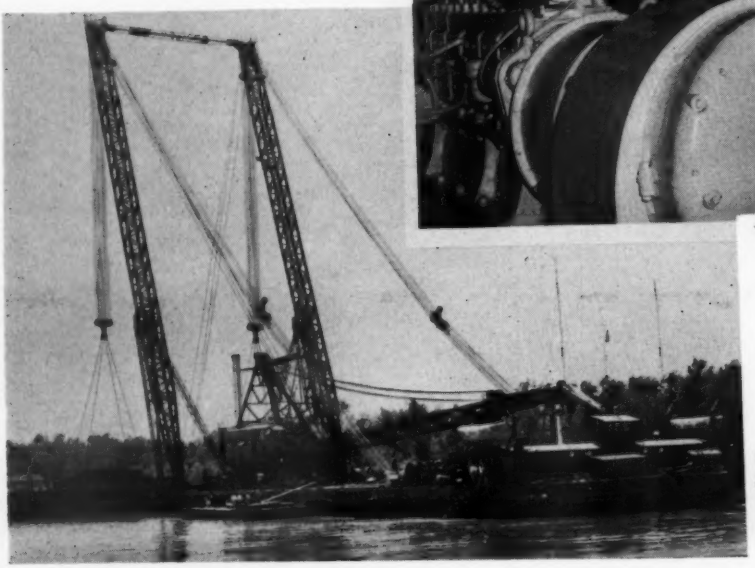
POWER TO SPARE!

Dependable WAUKESHA





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So successful was the installation and performance that identical equipment was placed on the McDermott Derrick Barge No. 9, recently put into service. Widely used in offshore operations in the Gulf of Mexico, both derrick barges have more than lived up to expectations.

Like many other successful marine operators, J. Ray McDermott & Co. can depend on Waukesha—and Reagan—for dependable diesel power and service.

REAGAN EQUIPMENT COMPANY

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Way offshore . . .

With the Publisher

THIS column has always been devoted to the serious and high-minded. In this light, we would like to pass along a story we heard not long ago. It was told at a shindig thrown by Tide Water to introduce C. N. "Charley" Pollak to the press. Charley is the company's new public relations director in San Francisco.

The story being Pure, it was told in Humble spirit to a group of Placid listeners by a gentleman from Texas suave enough to be classed as Continental.

It seems (according to our tale-teller) that during the last war a plane ferrying diplomatic couriers over the Atlantic encountered a storm, and trouble. On board were an American, Englishman, Frenchman and Greek. All were carrying diplomatic pouches.

As the storm grew worse and the plane lost altitude, the pilot passed word that something had to be jettisoned. There was only the passengers—and their diplomatic pouches. The American, aware of this fact, made a noble gesture. He announced that the papers in his diplomatic pouch were far more valuable than his life. He then stood up, said "God bless America," and leaped out of the plane.

The lightened plane righted itself and flew on for a short time, then the storm worsened and again the pilot passed word that something would have to be jettisoned.

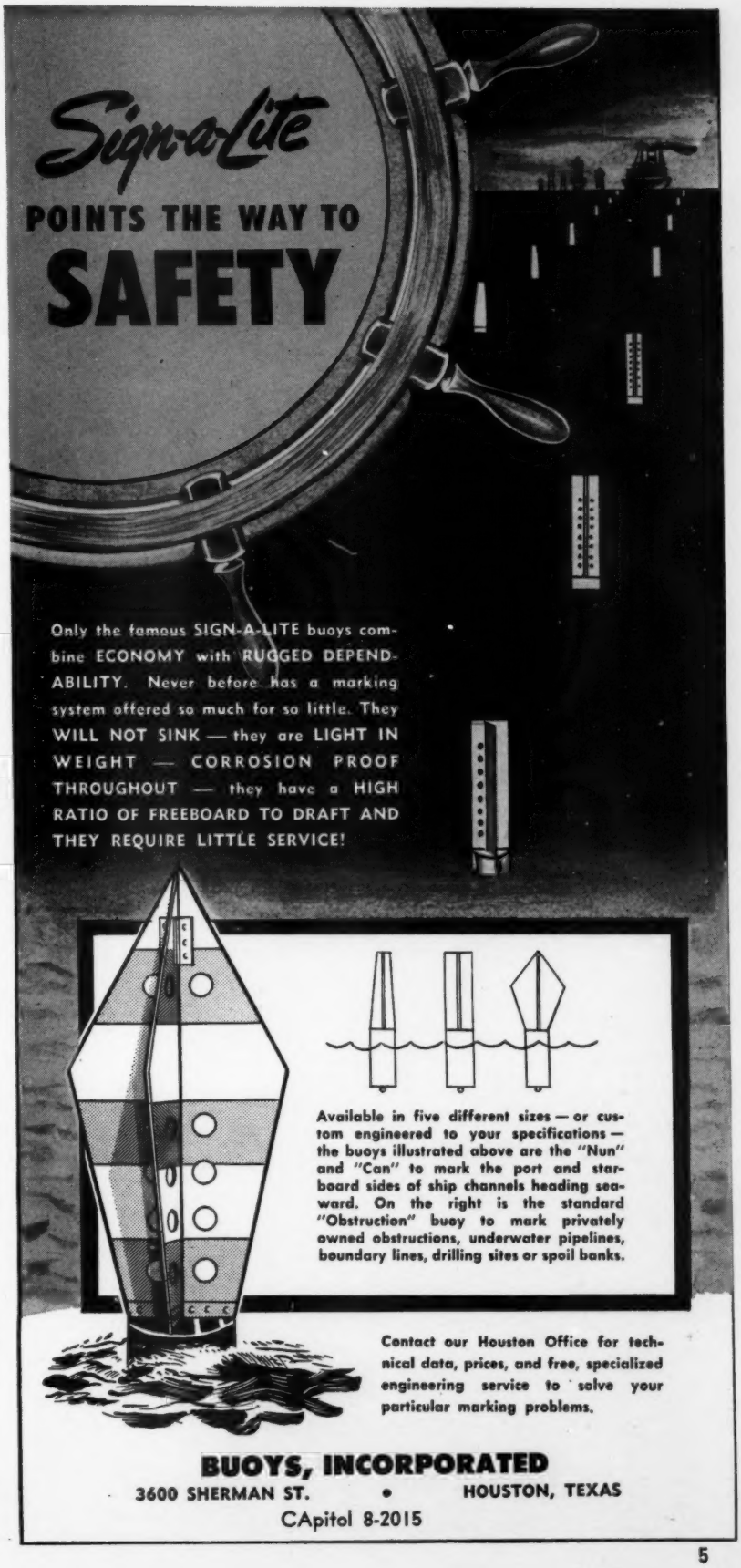
The Frenchman, emulating the American, stood up, said "Viva la France," and leaped out of the plane.

The plane gained altitude and flew on for a short distance. But the fury of the storm increased suddenly, and the pilot again frantically sent word that something would have to be jettisoned.

The Englishman thereupon stood up, saluted, and said "There'll always be an England." Then he grabbed the Greek and threw him out of the plane.

We're grabbing our hat and leaving while there's still time!

Long John Latham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Available in five different sizes — or custom engineered to your specifications — the buoys illustrated above are the "Nun" and "Can" to mark the port and starboard sides of ship channels heading seaward. On the right is the standard "Obstruction" buoy to mark privately owned obstructions, underwater pipelines, boundary lines, drilling sites or spoil banks.
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A FREE COPY!

Of The Louisiana Offshore Lease Map That Appeared In Our June Issue

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Letters to the Editor

To the Editor:

Your enclosed map in the June issue created a great deal of interest . . .

E. R. VORENKAMP
Shell Oil Company
New Orleans, La.

To the Editor:

Please send me five (5) copies of the Offshore Lease Map appearing in the June issue of Offshore Magazine . . .

WALTER P. OLIVER
Phillips Petroleum Company
Morgan City, La.

To the Editor:

I did not get a copy of your Louisiana Offshore Lease Map with my June copy of OFFSHORE. Could you send a copy to the address below?

C. B. JOHNSTON, JR.
Magnolia Petroleum Company
Morgan City, La.

Editor's note: The maps were "tabbed" in. If anyone else missed a copy, just notify us.

To the Editor:

Please send us six (6) additional copies of the Louisiana Offshore Lease Map, which was published in the June issue of your magazine.

G. A. ROUSSEL
Offshore Raydists, Inc.
New Orleans, La.

To the Editor:

I have found your publication so interesting and valuable to those of us in the oil industry that I wish some of my friends to share with me . . . (and enclose subscriptions) . . .

J. POPE KELLY
Marshall R. Young Drilling Company
Brookhaven, Miss.

To the Editor:

Please forward immediately three (3) Offshore Charts, State of Louisiana, that have just been circulated . . .

EDWARD P. ALLIS
Allis Oil Company
Abbeville, La.

To the Editor:

. . . Any lease map prepared for the State of Louisiana should show the Chapman Line and lines designating the three mile and three marine league boundaries. As most operators are interested in the so-called Perez line which you have indicated, it might be of further interest to them to have the three marine league boundary from that line shown. This is especially true in view of the present controversy . . .

HOWARD A. McKINLEY
Division Land Superintendent
Offshore Marine Division
Continental Oil Company

To the Editor:

We would appreciate your forwarding four (4) copies of the June issue . . .

C. W. VAN DYKE
Brown & Root Marine Oper., Inc.
Houston, Texas

To the Editor:

. . . Please send us eight of these charts (Louisiana Offshore Lease Map) . . .

K. F. COOPER
The National Supply Co.
Houston, Texas

To the Editor:

I have been most favorably impressed by your magazine, and I wish to subscribe . . . Although I have been drilling engineer for Shell Oil Company in Tulsa, Okla., for several years, I will be drilling engineer for N. V. Batasfshe Petroleum Mattschappij (Royal Dutch Shell) in the Hague, Netherlands, for the next six months.

In this temporary assignment I expect to visit many of Shell's overseas operations and trust that your publication will be helpful to me . . . Also, I would greatly appreciate receiving a copy of the offshore map which appeared in the June issue of OFFSHORE. This colored map is the best thing of its kind which I have seen.

T. W. RICHARDSON
N.V. De Batasfshe Petroleum Mattschappij
The Hague, Netherlands

To the Editor:

We are attaching our check . . . to cover fifteen one-year subscriptions . . . to be sent the following Humble employees, commencing with the June issue and to include map . . .

HUMBLE OIL & REFINING COMPANY
Production Department
Houston, Texas

To the Editor:

Please send ten (10) extra copies of June issue . . .

R. H. HURD
Barker Barge Line
Lockport, La.

Editor's note: We had to turn down many, many requests for copies last month—something we really hated to do! But not foreseeing the rush caused by the lease map inserted in the issue, we had only an extra three hundred printed—and those went like hot cakes! For those of you interested in obtaining extra copies of the map, send fifty cents in check, cash or money order to OFFSHORE, P. O. Box 977, Conroe, Texas.

THE COVER

Few can actually conceive the size and immensity of Lake Maracaibo's oilfields without seeing them—the mass of derricks rising out of the water, the huge storage tanks, the multiple piers, the pipelines, the sprawing camps.

On this month's cover is shown Lagunillas field and camp. Rows of wells, thrusting out into the lake, are as orderly as rows of cotton—and almost as prolific. Wells also dot the shore. In the foreground is an outdoor theatre, a concession to the tropical climate. Several American companies have oil concessions in Venezuela, and thousands of American citizens work and live there.

POWERED BY GEORGE

GM GENERAL MOTORS DIESEL POWER

LESS DOWN TIME WITH GM'S

Fifty-two feet of high speed survey and personnel boat—that's the CAPTAIN JACK! Powered by George Engine Company, built by Higgins, Inc., this all-steel constructed vessel develops a maximum speed of 22.4 mph and cruises at 19 mph.

The CAPTAIN JACK

Say George! — See George! — For Power by George!

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GM GENERAL MOTORS CENTRAL MOTORS DIESEL POWER

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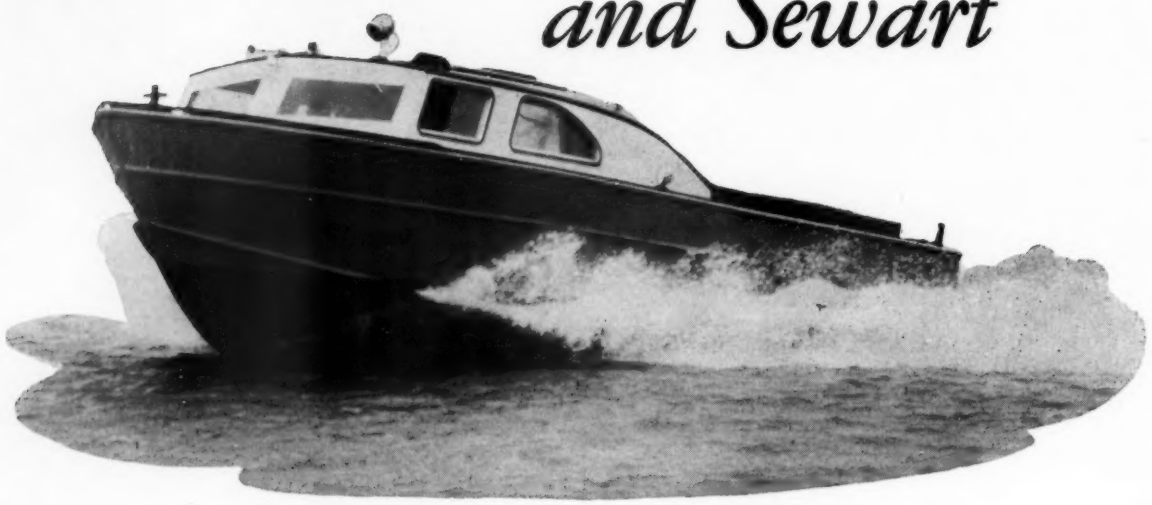
HARVEY LOUISIANA

The "Sirocco" . . . and Sewart



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Latest in a Complete Line of Crewboats

Dimensions: 40' x 12'3"
Top Speed: 31.3 MPH
Cruising Speed: 27.5 MPH

The "Sirocco," built for Jack Milsted of New Iberia, Louisiana, is the prototype of a new addition to the complete line of crewboats designed and buit by Sewart Seacraft. This 40-footer maintains an even keel even at high speeds in rough water. Powered by two General Motors 6-71 Diesels, generating 216 horsepower each, the "Sirocco" hit speeds well in excess of 30 mph in test runs. A special dinette arrangement on the "Sirocco" slightly reduces the 18 passenger capacity normal for this model. It's a crewboat that combines rugged strength and stability with speed and maneuverability.

The "Sirocco" exemplifies the fine design, construction and performance that have established Sewart's leadership in the manufacture of boats for the marine oil fields. Sewart Seacraft are known for fine craftsmanship, speed and dependable performance. There's no substitute for experience, and more than 500 Sewart Seacraft are now in service in the marine oil fields. For your boat requirements—See Sewart!

SEWART SEACRAFT, INC.

BERWICK PHONE PATTERSON 3913 NIGHT PHONES: 5434 - 2481 *LOUISIANA*

The controversy over . . .

Louisiana's Seaward Boundary

THE threat of federal regulation is currently hampering sensible development of offshore natural gas reserves. The dispute over Louisiana's seaward boundary is detrimental to the industry, as well.

The dispute, in effect, has created a no man's land several hundred miles long and several miles wide, lying off the coasts of both Louisiana and Texas. A situation has been brought into existence that has seriously retarded exploration of submerged areas only a short distance out in the Gulf of Mexico—areas which may prove to be enormously productive, and could be of inestimable value to the nation's economy and future welfare.

Because of their nearness to land, these disputed areas should logically be explored and developed before offshore operators venture into the farther reaches of the outer Continental Shelf. Accessibility to these nearby submerged lands, plus shallower water depths, make such a program more practical and attractive. Increasing water depths and remoteness from land-based services greatly accelerate drilling and production costs.

It is also evident that experience gained in shallow-water operations could be of tremendous value as the sea-going rigs venture farther offshore.

Yet it is equally evident that until the controversy over ownership is finally settled, and the legality of either the state or federal government's claim to these submerged lands is firmly established, little can be done in the way of exploration or development. The offshore industry is again the middleman, having to wait out time-consuming litigation.

In this light, the recent action on the part of the attorney general may be a good thing. Everyone in the industry knew that some such action was pending. The issue may finally be settled, with only government regulation of the natural gas industry remaining as a hindrance to development of valuable offshore reserves.

But settlement of Louisiana's seaward boundry will be no guarantee against further controversy. It is generally conceded that both Texas and Florida have legal right to a seaward boundary of three leagues, due to conditions under which these states entered the Union. The attorney general has also denied consideration of litigation involving any other coastal state.

However, if the federal government is victorious in its legal hassle with Louisiana, this situation might change overnight. The Justice Department might then enjoin Texas from further leasing of lands beyond the three-mile limit. Whether the government won its suit or not, the offshore industry would again suffer. The delaying action that has marked its entire history would be furthered by still another litigation.

The Editor

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PRS Coatings Are Engineered To Give Fullest Protection

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If you contact us to solve your coating problems, you will receive a product based upon research directed by your particular needs, designed for your particular use . . . **yet there will be no engineering costs!**

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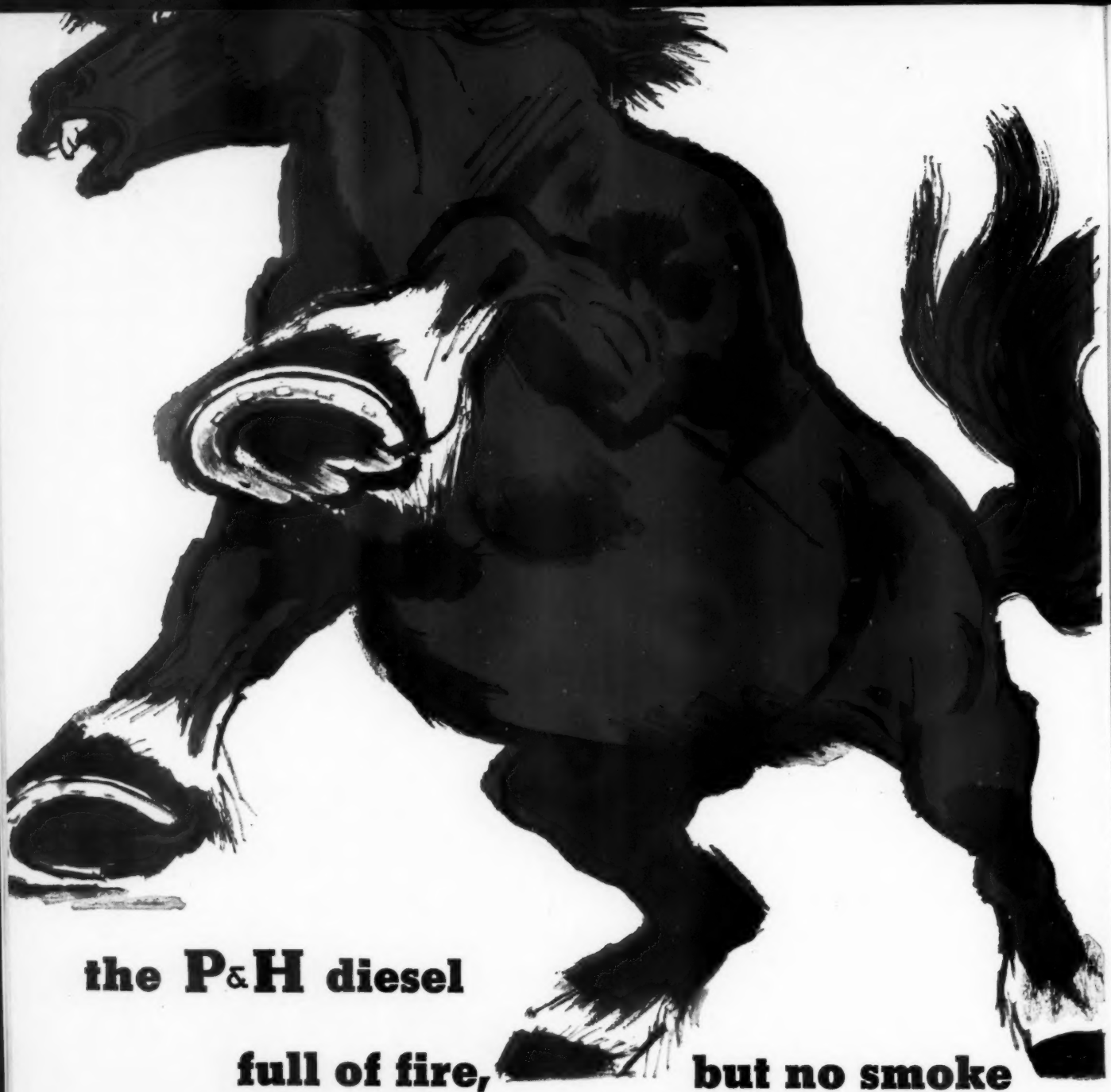
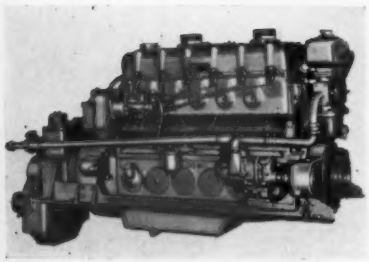


the P&H diesel

full of fire, but no smoke



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The better the combustion, the less the smoke — and the P&H is a *clean* diesel.

But check its efficiency in other ways. Cost per horsepower . . . it's the lowest of them all. *Weight* per horsepower . . . again the lowest. *Honest* horsepower . . . it's measured at the driveshaft where it all works for you.

Service? A P&H Diesel takes little of that. When it does, *how easy*. You can replace a whole cylinder assembly as a unit — in hours instead of days!

Quite an engine, this P&H Diesel . . . we'll be glad to send you the whole story. Write: P&H Diesel Engine Division, Harnischfeger Corporation, Crystal Lake, Ill.

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MERREL MARINE SERVICE
Port Isabel, Texas

ROGERS DIESEL ENGINEERING CO.
New Orleans, La.

OFFSHORE OPERATIONS

This aerial view near Lagunillas, in the Bolivar Coastal Field, shows row after row of derricks stretching away to the horizon.

Lake Maracaibo

Largest Offshore Oilfield

Marine drilling techniques developed in Venezuela's Lake Maracaibo are now in use around the world

VENEZUELA'S Lake Maracaibo is the most fabulous and prolific offshore oilfield in the world.

In 1953 the lake's more than 1950 producing wells—all located within the Bolivar District in Zulia State—yielded 645,000 barrels of oil daily. Coupled with production from 3,200 onshore wells, the district's daily output reached nearly 900,000 barrels—or one-fourteenth of total world production. Bolivar District is thus credited with being the richest oil producing zone known to man.

By September of 1954 there were 1989 producing wells in Lake Maracaibo. Average daily production remained about the same.

By early 1955, the output of Creole Petroleum Corporation, largest oil operator in Venezuela, and other firms from the Maracaibo Basin as a whole totalled approximately one-tenth of the world's crude oil production.

In January of 1955 Creole put into operation in Lake Maracaibo a unique $20 million gas conservation plant which shoots compressed gas back into the earth. The plant was designed to make possible an immediate 50 percent increase in oil production and a one-third increase in ultimate recovery of oil from the field where the plant is located. Plans are now being considered for the construction of a second plant costing nearly twice as much as the first.

By March of 1955 Venezuela was producing 2,144,800 barrels of oil daily—or approximately one-seventh of the world's crude oil production. Nearly one-third of this production came from the approximately 2,000 offshore wells in Lake Maracaibo.

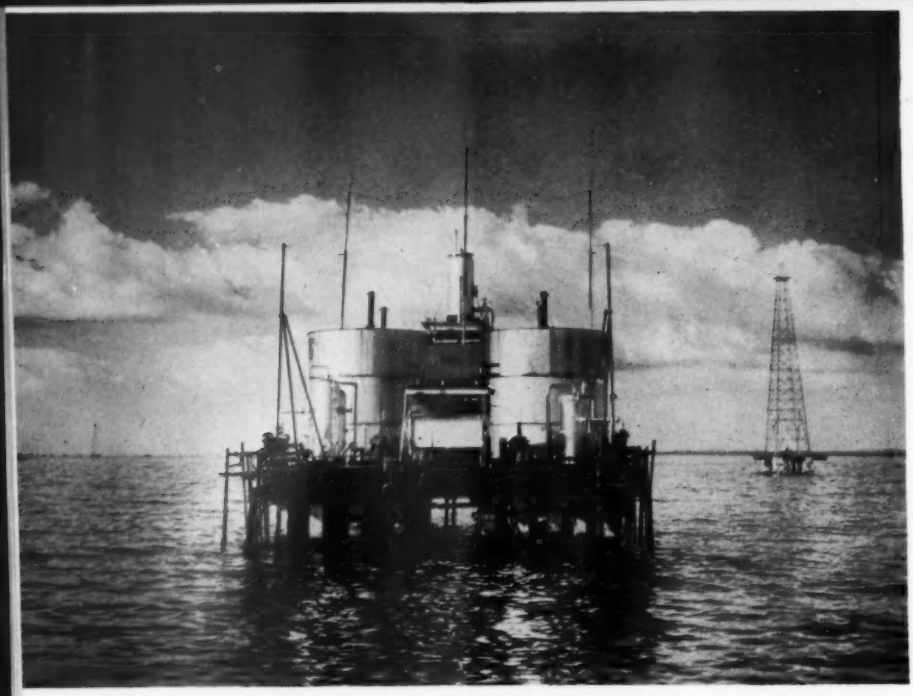
History . . . Underwater drilling was developed first in Venezuela. Marine drilling techniques initiated there have been used with success in the Gulf of Mexico, on the coast of California, and in many other parts of the world.

The first attempt to drill for oil in deep water was made by Creole Petroleum Corporation in Lake Maracaibo in 1925. Operating in water depths of 10 to 16 feet, Creole set wooden piles to support plank foundations. But it was found that the wood was invariably attacked by **teredos,** a sort of water termite abounding in tropical waters.

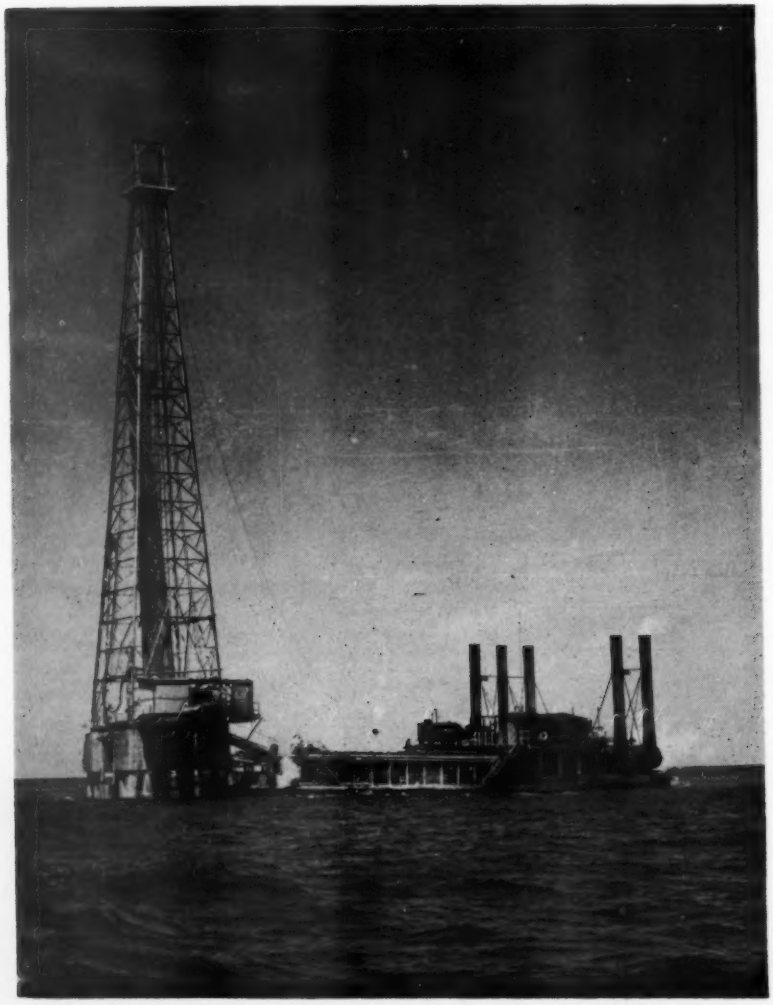
First concrete platform . . . In 1927 the first concrete platform built to support a drilling rig was completed. Seventeen concrete piles were used, and approximately 80 wooden piling were sunk to give added strength to the platform during drilling operations. The wooden piles were pulled after the well was completed.

The construction of wooden aux-

(Continued on next page)



A Creole Petroleum Corporation flowing station and tank battery on Lake Maracaibo. Creole is the largest oil operator in Venezuela.



Drilling in the lake. The derrick is up and drilling proceeds with the aid of a special barge carrying a boiler, mud pumps, bits, casing and other equipment. Marine drilling techniques developed in the lake are now in use around the world.

iliary foundations was dispensed with when drilling methods used on land were discarded and barges carrying all drilling equipment were put into use. The barges were especially built to handle repair work and pipe laying, as well.

Concrete caissons . . . Despite the progress made, no satisfactory foundation was found until a hollow pile, or caisson, was devised. These were made of concrete with a steel base. They measured 185 feet in length, 5 feet in diameter, and had a wall thickness of 6 inches. Caissons of this type weighed 100 tons and were floated from La Salina, where they were built, to the marine drill site. Lifted with powerful cranes to a vertical position, the upper end was cut open and the caisson filled with water. Weighing now 170 tons, it was sunk by placing on top four pairs of 50-ton cement slabs to drive it into the lake bottom.

Once the caissons were in place, a prefabricated concrete platform was mounted on top, to support a 129-foot derrick and accessory equipment. Ordinary platforms rested on four caissons joined together to prevent oscillation due to lake currents or tides.

Twin wells . . . Whenever twin wells were to be drilled, only six caissons were sunk to support two adjoining platforms. After the derrick was set up, a barge provided with boilers, mud pumps and casing would anchor by the platform.

The use of caissons was discontinued in 1953 for economy reasons, and solid concrete piling 200 feet long is now sunk into the lake bottom to support the drilling platform.

Wells in Lake Maracaibo are drilled on 600-meter squares. Where closer spacing is allowed, the pattern is reduced to 300 meters or 150 meters.

Hundreds of miles of submarine pipeline have been laid in the lake, connecting offshore wells with gathering, or "flow" stations located onshore.

The past year has seen prolific discoveries in the Gulf of Mexico, and in many other parts of the world. But booming Maracaibo remains the world's biggest offshore oilfield and seems to have the title cinched for years to come.

Lake Maracaibo

Creole's New Conservation Plant

- **Gas is "squeezed" to 1935 psi, injected back into producing formation**
- **Plant makes possible immediate 50 percent increase in production, ultimate one-third increase in recovery from field**

CREOLE Petroleum Corporation's Conservation Plant Tia Juana No. 1 marks a major step toward economic utilization of gas produced in the Bolivar Coastal Field of Venezuela.

Built at a cost of $20 million and located seven miles offshore on a platform over the waters of Lake Maracaibo, the plant is designed to gather a total of 154 million cubic feet of gas daily from the field. From eight nearby flow stations, where the gas is separated from newly produced oil, it is carried to the new plant through five 30-inch submarine pipelines at a pressure of 25 psig.

Of the total volume gathered each day, some 17 million cubic feet of gas is burned or compressed into liquids. The remaining 137 million cubic feet is compressed to 1935 psig and returned through five injection wells into the producing formation.

The plant was designed to make possible an immediate 50 percent increase in oil production and a one-third increase in ultimate recovery of oil from the field where it is located.

At the present time, only about 23 percent of the gas produced in Venezuela is used or conserved. The other 77 percent is vented into the atmosphere. With its new conservation plant — plus the construction of others—Creole hopes to eventually consume or store through reinjection at least 80 percent of the gas it now produces as a by-product to oil. Plans for a second plant, to handle 300 million cubic feet of gas daily, are now being considered for the same field.

Construction . . . Construction of the plant proper began in August, 1953, after the platform had been erected upon foundations driven into the lake bed. These foundations consisted of reinforced concrete piles, 28 inches square and 165 feet long. A total of 350 piles support the platform, which is 329 feet long and 143 feet wide. The platform stands 14 feet above the water and 80 feet above the lake bed.

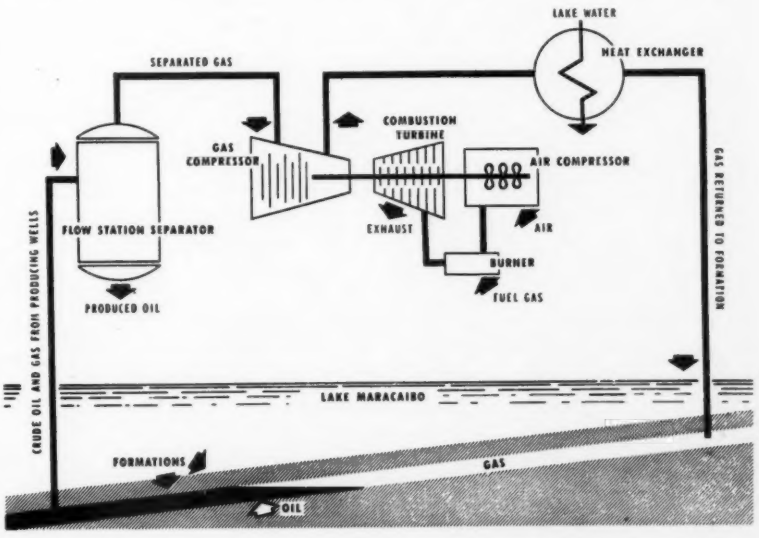
A feature of the plant is the installation of the highest pressure centrifugal compressor ever built, capable of 2,000 pounds discharge pressure. Ten 6,000 hp gas turbines power the compressor—the largest concentration of such turbines in the world.

Facilities . . . The plant is well-equipped with an instrument shop, a mechanical maintenance shop for small work, six offices, change-shower rooms, and a dining room. Communications with the shore is by radio-telephone and through the plant itself by an inter-com system.

Compression . . . Seven stages of compression are provided. The first stage requires the capacity of three compressors connected in parallel to handle the large volume of gas at the low plant intake pressure (25 psig). Two parallel-connected compressors form the second stage, while the remaining stages have one compressor each. Intercooling and interstage condensate facilities are provided between each of the stages. Provision is made for the interstage condensate to be stabilized and pumped to the nearest flow station for blending with crude. Prior to delivery to the injection lines, the seventh stage is cooled.

Productive horizon . . . The productive horizon into which the gas is injected was discovered in 1939 by Well LL-370, and is com-

(Continued on page 15)



FLOW DIAGRAM OF THE LL-370 PRESSURE MAINTENANCE PLANT
CONSERVATION PLANT TIA JUANA NO. 1

MECO 50,000 gallon per day plant

Fresh Water From the Sea

This giant 50,000 gallon per day distilling plant, together with several smaller MECO units, supplies all water requirements at an important airplane refueling center.

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Built by Consolidated Ship Yard, Inc., of Corpus Christi, Texas, this powerful, rugged crew-cargo boat, GUS III, is tailor-made for the Gulf operations of the C. G. Glasscock Tidelands Oil Co. — pioneers in offshore drilling.

Powered with two 6-110 GM diesel engines, the Gus III is built to go out and stay out — in any kind of weather. It is extremely seaworthy, and its cruising speed of 14 knots makes it ideal for transporting rig personnel, fuel, water and other supplies to offshore drilling sites.

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posed of the B-6-X Eocene sands. The subsurface reservoir is a permeable rock slab saturated with oil and about 200 feet thick, consisting of 85 percent sandstone and 15 percent shale. The top of the oil reservoir, at 4500 feet below the lake surface, is sealed off by the Miocene-Eocene unconformity and the bottom is bounded by immobile edgewater at 5850 feet. Two large faults define the side boundaries. The structure dips a gentle 3 degrees to the southeast and the total productive area involved is approximately 9800 acres.

This deposit is similar to all major oil accumulations in the Bolivar Coastal Field in two characterizations: It has no active water influx at the bottom, and it originally had no gas cap at the top. Production during the early years was entirely by solution gas drive. By 1950, a secondary gas cap formed by gravitational segregation had reached the structurally highest well.

It was apparent that even without artificial pressure maintenance, considerable increases in oil recovery above that to be expected by dissolved gas drive could be obtained by assisting the gravitational segregation and secondary gas cap development. In short, the reservoir was performing efficiently as a natural gas oil system except for the declining pressure and accompanying undesirable changes in fluid properties.

During the development of the reservoir, the importance of obtaining cores from the productive formation was recognized, and in many wells cores were obtained throughout the productive interval. Characteristics of porosity, permeability and fluid saturation were determined. All properties of the reservoir fluids were checked to obtain accurate data on the oil characteristics. Analysis of all this information was the initial step undertaken by Creole four years ago. In view of the complicated reservoir calculations involved and variations in the producing sands' characteristics and fluid content, estimation of the recoverable oil under various development programs required ten man-years of work.

Behaviour of the deposit in future years was estimated under three different conditions: (1) production by natural forces, (2) production by pressure maintenance with gas injection, and (3) production by pressure maintenance with water injection. Gas injection was decided on as the most advantageous.

Above: Pile construction in the La Salinas area. Creole used 350 reinforced concrete piles, each 50 meters long and 70 long tons in weight, to support the Lake Maracaibo gas conservation plant.
Below: A diver checks the lake floor. Conservation Plant Tia Juana No. 1 may be seen in the background.

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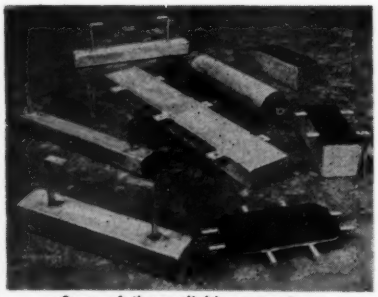

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CATC Commissions Drill Tender

Fourth $1.5 million auxiliary vessel will service combine's drilling operations in Gulf

THE CATC combine—Continental Oil Company, Atlantic Refining Company, Tide Water Associated Oil Company and Cities Service Oil Company—have commissioned and put into service a fourth $1.5 million drilling tender, and named it after an official of a participating company.

The **Jack Cleverley,** launched early this month, is named after J. A. Cleverley, vice-president of Cities Service Oil Company. Mrs. J. A. Cleverley was the sponsor, and officially christened the vessel after her husband.

The **Jack Cleverley** is a non-self-propelled vessel similar to the three previous drilling tenders built for CATC by the Levingston Shipbuilding Company of Orange, Texas. All

(Continued on next page)

Pictured at christening ceremonies for the Drilling Tender JACK CLEVERLEY in Orange, Texas, recently were (from left to right) Mrs. J. C. Craig, Mrs. Carle Sharp, Mrs. J. A. Cleverley, Mrs. C. T. Klein and Mrs. J. E. Heston.

have been named for officials of the participating companies.

The first tender, the **J. C. Craig,** was named in honor of the production superintendent of the Continental Oil Company, marine division, and was the first of its type to be built in Texas. Conoco is operator for the CATC Group.

The second tender constructed especially for CATC's offshore program was the **Carle Sharp,** named after the manager of the domestic producing department, Gulf Coast region of the Atlantic Refining Company. The third was the **Ernie Miller,** named in honor of the vice-president and southern division general manager of the Tide Water Associated Oil Company.

All of the vessels were tailor-made for CATC's offshore operations, and built to class under the rigid inspection of the American Bureau of Shipping, U.S. Coast Guard, and to conform with the requirements of the United States Public Health Service.

Facilities . . . The **Jack Cleverley** provides comfortable air-conditioned quarters for fifty men, each room being equipped with a thermostat for individual temperature control.

The galley is equipped with the most modern kitchen appliances, including a walk-in food freezr, refrigerator, separate ice-cube unit, and stainless steel sinks. The dining room is arranged cafeteria style, and will serve 32 men at a time. The tender is also equipped with a laundry and radio room, with the latter having a radio telephone for ship-to-shore communications.

The engine drive group consists of Mid-Continent Supply Company's 3-AE Pump Drive, with three Superior PTDS-8 diesel engines which power the three Emsco D-700 mud pumps.

A helicopter flight deck, 64 feet long by 54 feet wide, is built over the forward end of the vessel, with the roof of the upper deckhouse forming a portion of the flight deck.

Safety features . . . Safety features include two 25-man lifeboats, with required equipment, ring buoys and life preservers, and a carbon dioxide fire-fighting system throughout the ship. Hand railing is installed as required by the U.S. Coast Guard.

The new CATC tender can be used to drill in water depths up to 100 feet, where it is too deep for drilling by conventional submersible-type drilling barges. The vessel has seven mooring lines. Six are 1½" wire rope and one is 2" wire rope. During rough weather the tender will be backed away from the drilling platform, but will be towed to shelter only when hurricane weather is forecast.

Group history . . . Organized in July, 1946, each of the participating companies have a one-fourth interest in the CATC Group's operations. CATC spudded its first well in March, 1953, in Louisiana's West Bay, about five miles off the coast of Plaquemines Parish. The test resulted in the discovery of the West Delta Field, where CATC now has ten wells producing an average of approximately 1,700 to 1,800 barrels daily under present Louisiana allowables. The combine also has eleven shut-in gas wells—five in West Delta, two in its newly discovered East Cameron Block 71 field, and four in West Cameron Block 192 field.

CATC's percentage of successful wells has been exceptional. Of 31 wells completed to date, 21 have been oil or gas producers. Ten were dry holes. The group has approximately 37,000 producing acres off the coast of Louisiana, and 330,000 undeveloped acres of the coasts of Louisiana and Texas.

THE NEW PAYNE PUMP ACCUMULATOR UNITS

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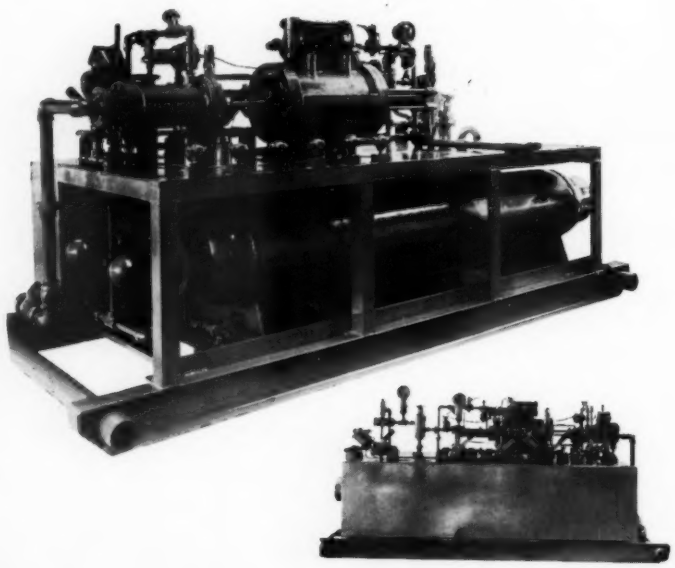

These units are composed of a pump, a hydro-pneumatic accumulator, a fluid reservoir and fluid control manifold for any number of blowout preventers.

Air, steam, electrical, and gasoline powered Payne pumps with several volumes and pressures are furnished with these units.

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When the pressure drops to 1800 PSI on the accumulator, the pump automatically returns the pressure to 2000 PSI by means of a pressure switch which cuts the power to the pump at that pressure.

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Washington

Boundary Battle Looms

Court decision delayed, but Interior Department and Louisiana offer same leases within state's 3-league limit

OIL companies who bid July 12 for leases on certain tracts of submerged lands lying off the Louisiana coast may not know until next year just who their offshore "landlord" will be.

The federal government and the state are both holding lease sales on that date, and both are offering 29 tracts inside the state's 3-league seaward boundary.

The state claims a seaward boundary of 3 leagues, and claims jurisdiction over all submerged lands within that area. The federal government, on the other hand, contends that Louisiana owns only a 3-mile strip of the tidelands and has filed a petition asking that the Supreme Court confirm this fact. Without waiting for a court decision, the government has gone ahead with plans to offer at its July 12 sale of leases on the outer Continental Shelf certain tracts inside the 3-league boundary claimed by Louisiana **(see lease map insert, OFFSHORE, June, 1955).**

To further complicate matters, the Supreme Court has recessed from its 1954-55 term without taking action on the petition filed by Attorney General Brownell asking clarification of the boundary problem. So while the federal government may auction off tracts between th 3-mile and 3-league seaward limits July 12, the state is going to try to auction off the same identical tracts and no one can be certain until the next term of court just which offshore "landlord" will be accepting the rent——the Department of Interior or State Mineral Board.

In fact, it's a toss-up as to which sale to attend!

California

New Bill May Spur Tidelands Search

A new bill, lacking only the governor's signature to become legal, opens large portions of the Californit tidelands to oil exploration and development.

Approved by the senate and passed by the assembly on the last day of the legislature, the bill opens considerable areas of California's offshore lands to oil operators. It also legalizes drilling from platforms, from earth-filled islands, and from piers.

Most of the lands affected lie off the Southern California coast.

Restricted from leasing or development are tidelands areas adjacent to many beach communities, including famed Santa Monica and Los Angeles.

Governor Goodwin Knight has indicated that he would sign the bill, if it passed the legislature.

Douglas High Bidder At Huntington Beach

Douglas Oil Company made the high bid for a 320-acre tract of land lying offshore from Huntington Beach, the California State Lands Commission has announced. The tract is adjacent to the onshore Jones pool, and there is every indication that the shallow pool may extend out under the Pacific.

Drilling will be from a land-based site.

"Getting up in the world" is this workman who stands on the crown of the rig at Continental Oil Company's A-3 State Lease 1657, 140 feet above the deck of the Drilling Tender M/S PELICAN. The well is in the West Cameron Block 192 Field, 28 miles offshore from Cameron Parish, La.

Louisiana

Drill Barge Capsizes Off Coast

Personnel saved as $2 million American Tidelands unit tips over and sinks in Gulf near Grand Isle

THE American Tidelands 101 capsized in the Gulf of Mexico recently, sending most of the 43 men aboard into the sea. All of the men escaped without serious injury, although some had burned hands from sliding down ropes to abandon the sinking barge.

The accident happened about two and one-half miles out in the Gulf, offshore from Grand Isle. Crewboats from the nearby Humble Oil & Refining Company docks picked up some of the personnel from the barge, and the tug **Delilah** picked up the rest.

The 101 had just completed a well, and was being refloated to tow to a new location. At about 4 a.m., the huge submersible-type drilling barge began listing. At 4:45 it capsized and sank, with only its ponderous steel side remaining out of the water, dwarfing rescue boats that rushed to the scene.

Aboard at the time of the accident was Spencer Rowan, vice-president of American Tidelands. Rowan stated that it was fortunate the barge capsized and sank so slowly, as there was ample time for a warning that got all of the men safely off.

Many of the men were asleep in air-conditioned quarters when the alarm sounded. They scrambled over the side into the water, a few in only pants or underwear, where rescue boats immediately picked them up.

Salvage operations were expected to start immediately. The drilling barge, commissioned and put into service in February, was on its first job on contract to Humble. A well had been completed, and the barge was being refloated preparatory to changing locations when the accident occurred.

The immediate cause of the accident was not ascertained. Apparently the barge hull must have been raised slightly off the Gulf floor, or one end raised, for an American Tidelands official stated that it would not tip over if it were resting completely on the ocean floor.

OFFSHORE TAXI—In a single three-month period, this busy three-place Bell helicopter, owned by Magnolia Petroleum Company, has carried 362 passengers to and from the company's offshore drilling platform eight and one-half miles off the Texas coast from Sabine Pass, in addition to delivering needed supplies and parts. Pilot Travis Rhodes and Mechanic Barney Akins are shown visiting Bell's helicopter plant at Fort Worth on one of the infrequent trips the 'coper makes to Magnolia's main offices in Dallas.

Drilling Barge Destroyed By Well Blaze

A blazing gas well destroyed a rig and drill barge at the Texas Company's No. 16 St. Mary Land Co., Unit 1, St. Mary Parish, La., before it was brought under control.

The wild well, in the Horseshoe Bayou area, burned out of control for three days after it blew out at 11,753 feet and caught fire. The well blew out after pressure had increased to a terrific 30,000 pounds with blowout preventer closed. The well erupted gas and water over a wide area before it was killed by pumping mud down the hole.

The burned-out barge was scheduled to be moved out, and a new barge brought in.

New Oil Production Off St. Mary Parish

Off the coast of St. Mary Parish, in the Gulf of Mexico, Magnolia Petroleum Company has indicated new oil production at the No. 1-A State Lease 695, seven miles west of the Eugene Island Block 126 field.

The well bottomed at 11,030 feet, with string of 7-inch cemented to 9700 feet. Operator perforated from 10,110-16 feet after running liner. On 12/64-inch choke, well flowed 39.5 gravity oil at the rate of 132 barrels daily, with a gas-oil ratio of 1141 to 1.

Second Sand Indicated At Terrebonne Wildcat

Magnolia Petroleum Company has found a second productive sand at its No. 1-A State Lease 777, O.C.S. 067 wildcat off Terrebonne Parish in the Gulf of Mexico.

The well was drilled to 11,475 feet. From perforations at 10,298-304 feet, well tested 20 barrels of 34 gravity oil daily on a 12/64-inch choke with 1.8 million cubic feet of gas.

On a five-hour test from perforations at 7470-76 feet, well flowed 73.78 barrels of 33.9 gravity oil daily on a 12/64-inch choke.

The indicated discovery is in Ship Shoal Block 113. An offset well has been staked. A company rig will drill the No. 2-A to 7500 feet.

Texas

Magnolia Has Gas Well Off Jefferson County

Off Jefferson County, in the Gulf of Mexico, Magnolia Petroleum Company has run an open flow gauge of 38,000,000 cubic feet of gas daily on its No. A-2 Texas Gulf, Tract 9.

The 8439-foot well is completed

from perforations at 8247-57 feet, and posted a shut-in pressure of 3187 pounds. The well spots 10 miles southwest of Sabine Pass, and is drilled from the same surface platform as the A-1 discovery which was completed at 8016-30 feet for gas distillate production.

Magnolia is drilling Well No. A-3 from the same platform.

Atlantic Asks Permits For Offshore Structures

Atlantic Refining Company has requested a blanket permit from the U.S. Corps of Engineers to erect structures and do allied work in the Gulf of Mexico, some 39 miles east of Corpus Christi and offshore from Nueces County, Texas. Involved are Blocks 716, east half of 718, 726 and 727.

Offshore Lease Sale Expected in September

No public announcement has yet been made, but it is unofficially predicted by officials in Austin that the largest offering of offshore Texas state school tracts of the year will be made September 6.

Probably the School Land Board, of which Commissioner Earl Rudder is chairman, will announce dates for the sale in a July meeting.

Meanwhile, the General Land Office has had a small flurry of requests from operators for tracts to be put up for auction. These pre-sale requests have considerable effect upon selection of the tracts, though by no means are the auctions held on a "name-your-tract" basis.

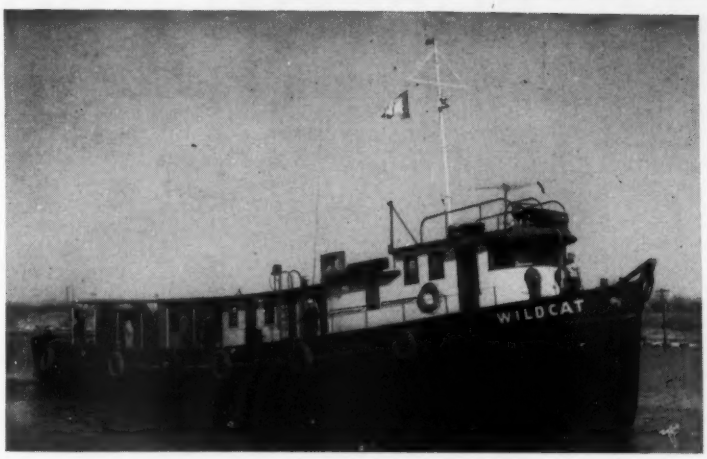
The last offshore offerings, in May, brought an average of $132 an acre in cash bonuses as compared to the previous high average of $77 an acre in December, 1953.

Commissioner Rudder does not think any stirring around of governmental interests in Washington will affect either the number of tracts to be offered or the prices to be realized.

"I think the tidelands are in Texas hands to stay," he said.

Brazoria County tracts seem to be the favorite of operators coming in early with their suggestions for the auction. Aransas acreage should also get a good play.

Several tracts will probably be offered on the basis of a set cash bonus and high royalty bidding. This has worked satisfactorily in a few instances with surveyed school lands and was tried at the May sale.



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Power:
Two 6-110 GM diesel engines

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Appliances:
All electric—stove, refrigerator, deep-freeze, water heater water fountain

Accommodations:
Four above deck
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Cargo Hold:
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Construction:
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Tonnage:
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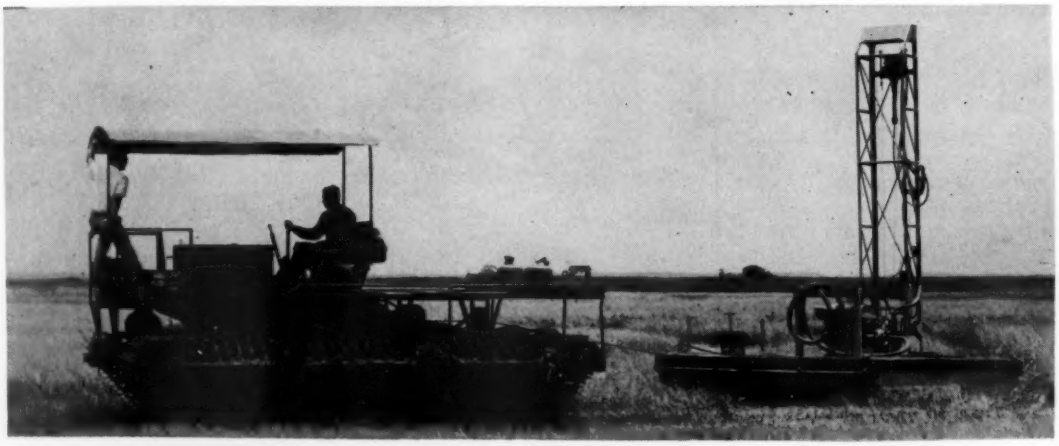

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Shell Oil Company

I-Marine Characteristics*

THE initial floating stability of a mobile unit, as indicated by its initial metacentric heights, is a factor in its overall design. However, all designs tend to have initial metacentric heights which are more than adequate. Therefore, a more important consideration is the stability of these designs when they are being placed on location or while they are being towed under adverse weather conditions.

Figure 2 illustrates how a typical fixed-deck unit would behave if sunk horizontally without pontoons or other stability members. The metacentric height would start high, on the order of 50 feet, and decrease slowly until the deck of the supporting hull became awash, at which time the metacentric height would suddenly become negative. At this point the unit would capsize unless the water was shallow enough to enable the soil to restrain it.

For this reason, the units which do not have sufficient stability to sink horizontally are sunk one end first to maintain floating stability until they gain soil stability. Other units are designed with pontoons, fixed hull extensions, or bearing feet to overcome this problem. The advantage of sinking one end first when pontoons are not used is illustrated in Figure 3, where the end-on sinking stability is plotted for the same mobile unit as used in Figure 2.

Up to this point, all references to stability have applied to initial stability, i.e., small angles of inclination; but the more important consideration is the stability at larger angles up to the point where the unit would capsize. The metacentric height for large angles of inclination cannot be calculated by the elementry equations governing floating bodies, but instead it is necessary to apply either graphical or trial-and-error methods.

Referring to the sketch in the upper right-hand corner of Figure 4, it is obvious that when KM equals KG the metacentric height (GM) will be zero, which means that the unit is unstable. In Figure 4 the KM and KG values for different drafts are plotted as a function of the angle of heels, and a range of stability curve is plotted through the points of intersection.

The range of stability is probably the most important marine characteristic of mobile units. It can be defined as the number of degrees that the unit can be inclined before it capsizes. Mobile units characteristically have a large initial metacentric height on the order of 50 feet or more, with a small range of stability of approximately 20 de-

(Continued on next page)

*Excerpt from a paper presented by Mr. Howe before the Offshore Session of the API Southwestern District Meeting in New Orleans, March, 1955.

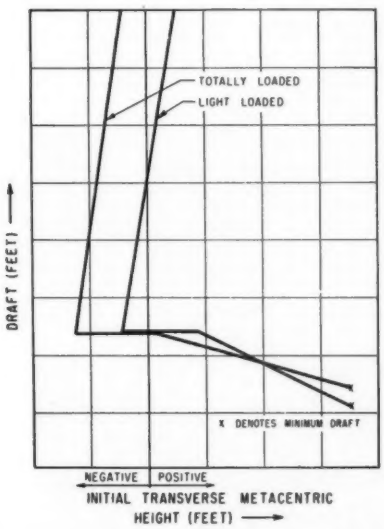

Fig. 2 -- Horizontal Sinking Stability of a Typical Fixed-Deck Mobile Unit without Pontoons

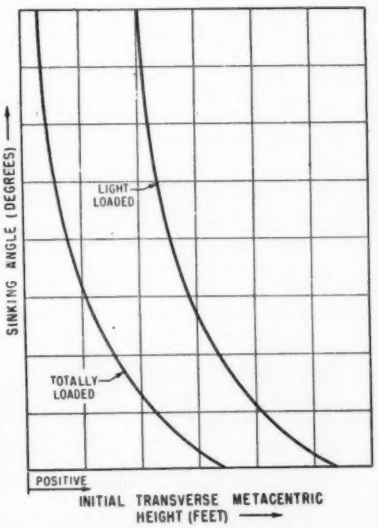

Fig. 3 -- End-on Sinking Stability of a Typical Fixed-Deck Mobile Unit without Pontoons

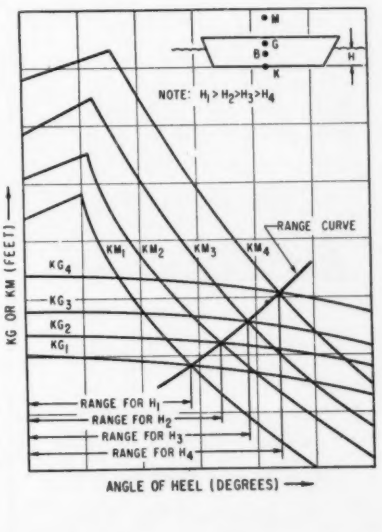

Fig. 4 -- Range of Stability for a Typical Mobile Unit

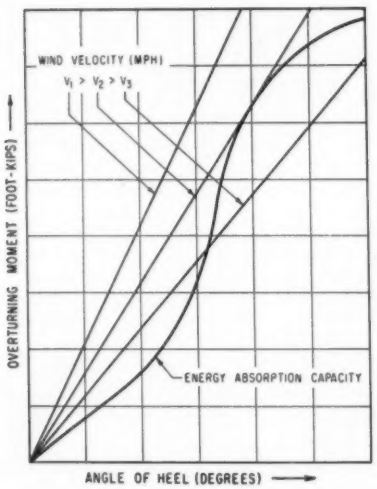

Fig. 5 -- Energy Absorption Curves for a Typical Mobile Unit

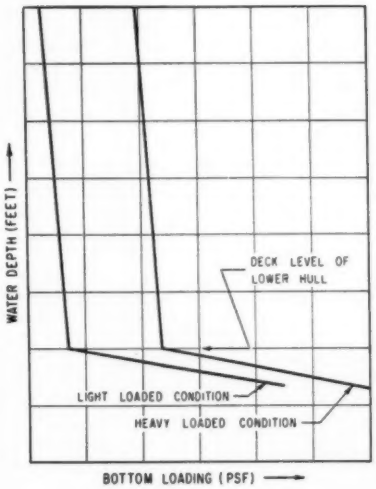

Fig. 6 -- Bottom Loading Curves for a Typical Fixed-Deck Mobile Unit

grees, while the converse is true of ships which have a GM of 3 to 5 feet and a range up to 75 degrees. There is nothing alarming about this disparity between the range and GM of mobile units and ships because the two factors are complementary, and a more important criteria in the final analysis is how much energy they can absorb before overturning. Figure 5 shows an energy absorption curve for a typical mobile unit. This curve indicates how many degrees the unit will incline or heel when subject to various overturning moments. In the case illustrated, a wind velocity of V_3 miles per hour would be the maximum energy that the unit could tolerate, while a wind of V_3 miles per hour would upset the unit.

Another marine characteristic to be considered is the natural floating period which is a function of the metacentric height and mass moment of inertia. Units of the elevating or elevated-deck type tend to have natural periods which are in the range of the wave periods. However, the large amount of damping afforded by the rectangular hulls minimizes this problem.

The bottom loading capacity of hull-support mobile units can be considered as a marine characteristic. It is a very important factor, particularly where no supplementary lateral support is provided by piling, hull extensions, or fins. This capacity is a function of the external geometry of the unit and weights of various components. In the evaluation of any hull-support unit it is necessary to determine the maximum and minimum bottom loading characteristics for different drafts.

The maximum and minimum bottom loading curves for a typical fixed-deck unit are shown in Figure 6. The break of the curve in this case occurs when the hull is completely submerged.

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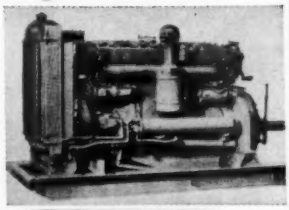

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The Multiple Well Rig

by DOUGLAS MAGINNIS
OFFSHORE Equipment Editor

- Use of the Lee C. Moore multiple well rig cuts initial drilling platform costs
- Moving from one "location" to another is simpler, easier, faster

THE advantages of drilling several wells from the same offshore platform, without having to move either the derrick or rig components after completion of a well, have been successfully proven during the past eighteen months in the Gulf of Mexico.

The California Company conducted one of the first such operations by drilling six development wells to about 9,000 feet in Main Pass Block 69 field off Plaquemines Parish, within Louisiana's three-mile limit and in about 18 feet of water. When the wells were completed the platform installation, derrick and rig were moved to another location, the platform remaining to serve as a marine production base.

Lee C. Moore Corporation designed and built the special 140-ft. derrick and substructure. The platform was designed by Calco and built by Avondale Marine Ways, Inc., of New Orleans.

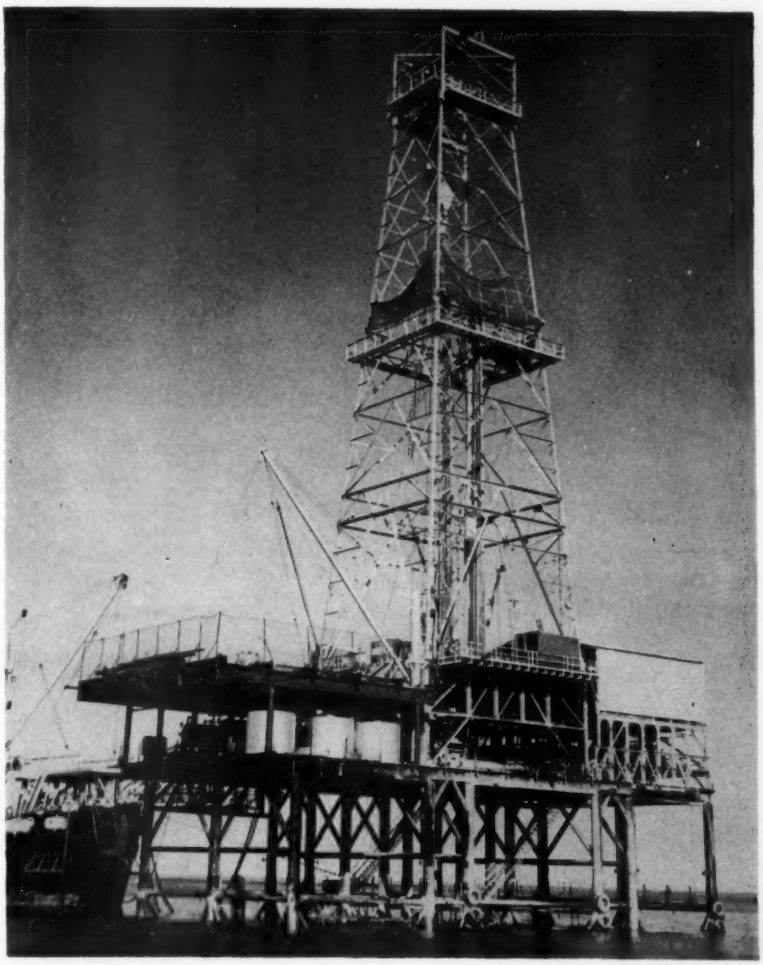
Main Pass Block 69 field is a salt dome structure, and Calco's six-well drilling pattern consisted of 2 rows with 3 wells each. The first well was drilled straight down to the pay zone. The second well was directionally deflected, and the other four wells were subsequently drilled according to geologists' determination. The two rows were spaced 10 feet apart and wells within rows 7½ feet apart.

Experience with this arrangement has proven the economics behind the reason for its design and use. That reason was the reduction in cost of the drilling platform. By using the six-well derrick the necessary pilings were reduced from 32 to 18.

Rotary positions . . . The derrick used by Calco had to be designed to accommodate the rotary table's six different positions on the derrick floor, with the drawworks remaining completely stationary. A special arrangement permits the crown block and special guide-sheave assembly to be moved into any of the six different positions without affecting the spooling on the drawworks drum.

Effective power transmission to the rotary table is achieved by using a jack shaft. A triple sprocket extension provides chain drive to the rotary table. The drive chain, enclosed in a specially designed oil bath trough, can be lengthened or shortened and mounted left or right, to power the rotary table in any of its six desired positions.

Derrick . . . The derrick substructure is large—40 feet wide by 45 feet long. Its base height of 23 feet 1 inch is sufficient to accommodate the largest type blowout preventers. The top of the derrick tapers to 18 feet wide by 23 feet long.



A six-well platform in the Main Pass Block 69 field, off Louisiana's Plaquemines Parish. The rotary table, crown block and special guide-sheave move to any of six different positions, but the drawworks remain completely stationary.

The derrick has a capacity of 867,000 lbs. with V-doors on each of its sides. The rig used at Main Pass Block 69 field is capable of drilling to 14,000 feet with safety.

Crown positions . . . The special derrick incorporates a trolley-type gin pole (with 10-ton hoist) for rapid skidding of the six-position crown block. In drilling three wells in a row the crown is skidded along header beams. For the second row of three wells the crown is swung 180°, two idler sheaves are repositioned, and the operation repeated.

The unique design of the crown block and guide-sheave assembly

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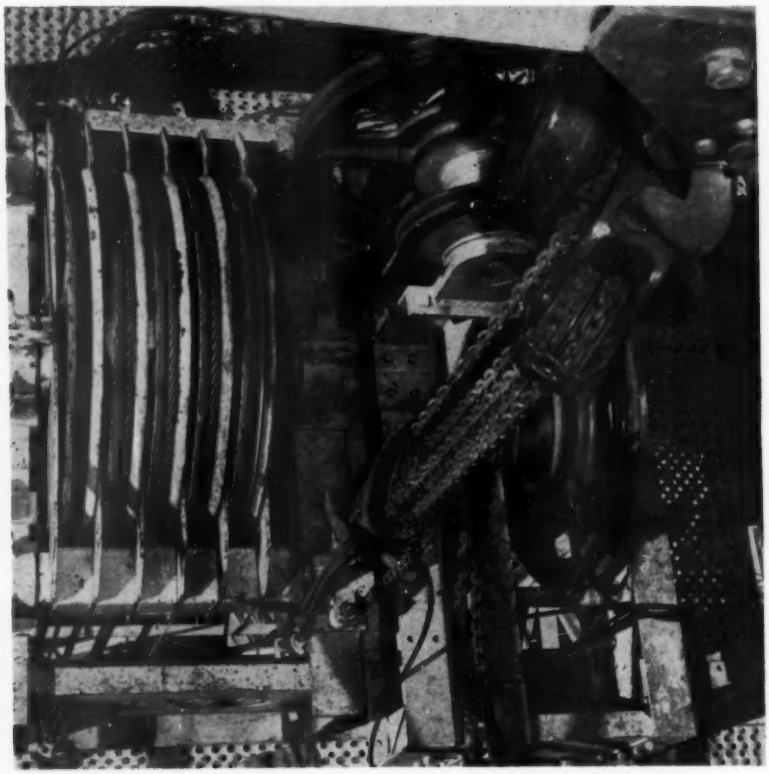
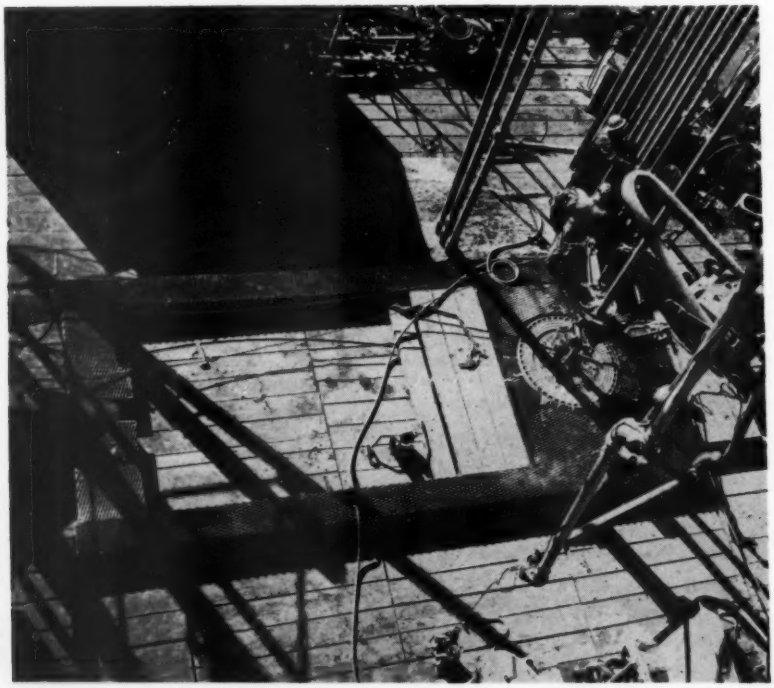


Crown—plan view. The special 90 sheaves appear in the upper right.

The chain drive on the rotary table from the jack shaft is fully enclosed. The drive chain can be lengthened or shortened, mounted left or right, to power the rotary table in any of its six positions.



spells the success of easily moving from one "location" to another, particularly from one row of three wells to the other three-well row.

The crown block is a regular six-sheave block with one of its sheaves removed to allow passage of the wire line down to the traveling block; and a specially designed guide-sheave set-up with two sheaves mounted at right angles to each other.

A spacer is added to the regular block to take up the play on the shaft where the removed sheave was formerly mounted. The two-sheave guide-assembly, with its sheaves at right angles to each other, is used to transfer the wire line around the 90° turn, over one sheave of the guide-sheave assembly down to the traveling block and back over the crown block in the usual manner.

This one-per-well line transfer, calling for the special right angle sheaves, plus the five sheaves of the regular block, is necessary in order that the wire line will spool correctly on the drawworks drum, since the drawworks itself remains stationary at all times.

Other movable features . . . Other movable features of the derrick include backup post for tongs, pipe standback and stabbing board, finger board and money board at 84-ft. fourble platform level. All of these items' movability constitute greater efficiency and safety factors for a six-well rig.

Fourble platform or run-around is extra large, being 33 feet by 28 feet. Special structural members have been installed across the derrick at the fourble platform level to afford safety should the derrickman accidentally drop a stand of pipe (a walkaway has been placed between the members). If this precaution had not been taken, any stand of pipe getting away from the derrickman would probably fall against the side framework, inasmuch as the derrick is so wide at this elevation.

In moving from one well to another in the same row, it is not necessary to thread the blocks. However, in moving from one row to another, the blocks must be rethreaded, the guide-sheave assembly in the crown block area rotated on its axis 180° and the blocks and sheaves rethreaded.

Rig tests . . . The complete rig was given exhaustive tests at Harvey, La., before "putting to sea," with the tests observed by officials of all involved companies including

Noble Drilling Company, the operating contractor. The derrick was then dismantled to fourble level of 84 feet, put on barges and towed to Calco's location in Main Pass Block 69 field.

To arrive at the proposed drill site, the derrick was towed down the Mississippi River for a distance of about 120 miles and then out into the Gulf of Mexico. There it was lifted onto the already installed platform and substructure.

Platform . . . The specially fabricated platform had been towed on a barge to location and placed on piles driven through a jacket 55 feet wide by 111 feet long, which had been sunk earlier into the ocean floor to a depth of about 15 feet.

The entire prefabricated deck section weighed 220 tons. A pipe-rack located over one end of the deck section is designed to handle 12,500 feet of casing. Headers and separators for producing wells, and three 100 bbl. tanks for fuel and water storage, were installed under the pipe-rack.

On the other end of the deck is the prefabricated engine substructure with a top and bottom floor. Two mud pits, two slush pumps and a mud mixing pump are on the bottom floor. Three super-charged engines, compound and drawworks, have been installed on the upper floor.

Limited quantities of fuel and drilling water are kept on the platform. An LST tender, moored nearby, is used as a warehouse for materials and as quarters for the drilling crew.

The six well platform set-up was designed and placed in operation primarily as an economy measure, and results already obtained indicate the highly practical values of such a set-up where conditions dictate the drilling of multiple wells.

Zapata Buys Second Unit For Gulf Operations

The Zapata Off-Shore Company, of Houston and Midland, Texas, has purchased a second unit to be used in offshore drilling operations in the Gulf of Mevico, according to George Bush, president.

Zapata has purchased a 2400-ton Y-F barge from Standard Oil Company of Texas which is being converted for use as a drilling tender. The company has also acquired a 16,000-foot rig which will be used on stationary platforms serviced by the tender.

As soon as conversion is completed, the tender will be put to work on contract drilling in the Gulf of Mexico for Standard of Texas.

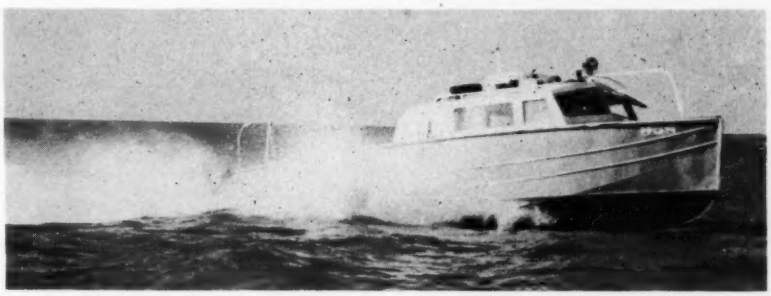
Zapata also has under construction a self-contained drilling platform. Designed by R. G. LeTourneau, Inc., and being built at Vicksburg, Miss., the platform will be ready this month, but an additional 30 to 50 days will be required for outfitting.

State To Hold Sulphur Lease Sale

The first auction of sulphur leases in the offshore Texas Gulf areas will be held August 2. Public announcement of this sale is expected shortly from the General Land Office.

Auction will be sealed bids for cash bonuses and regular royalty rates, according to Land Commissioner Earl J. Rudder. Tracts to be offered will be mostly in the waters off Galveston and Brazoria Counties.

The August sale will mark the first time sulphur leases have been offered at a separate sale. Hitherto a few tracts have been thrown in with the regular surveyed school land tracts offered for oil and gas lease. The last activity in sulphur leasing was bidding for a tract along the San Benard River in 1954.



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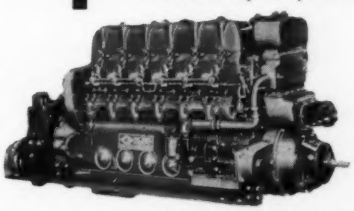

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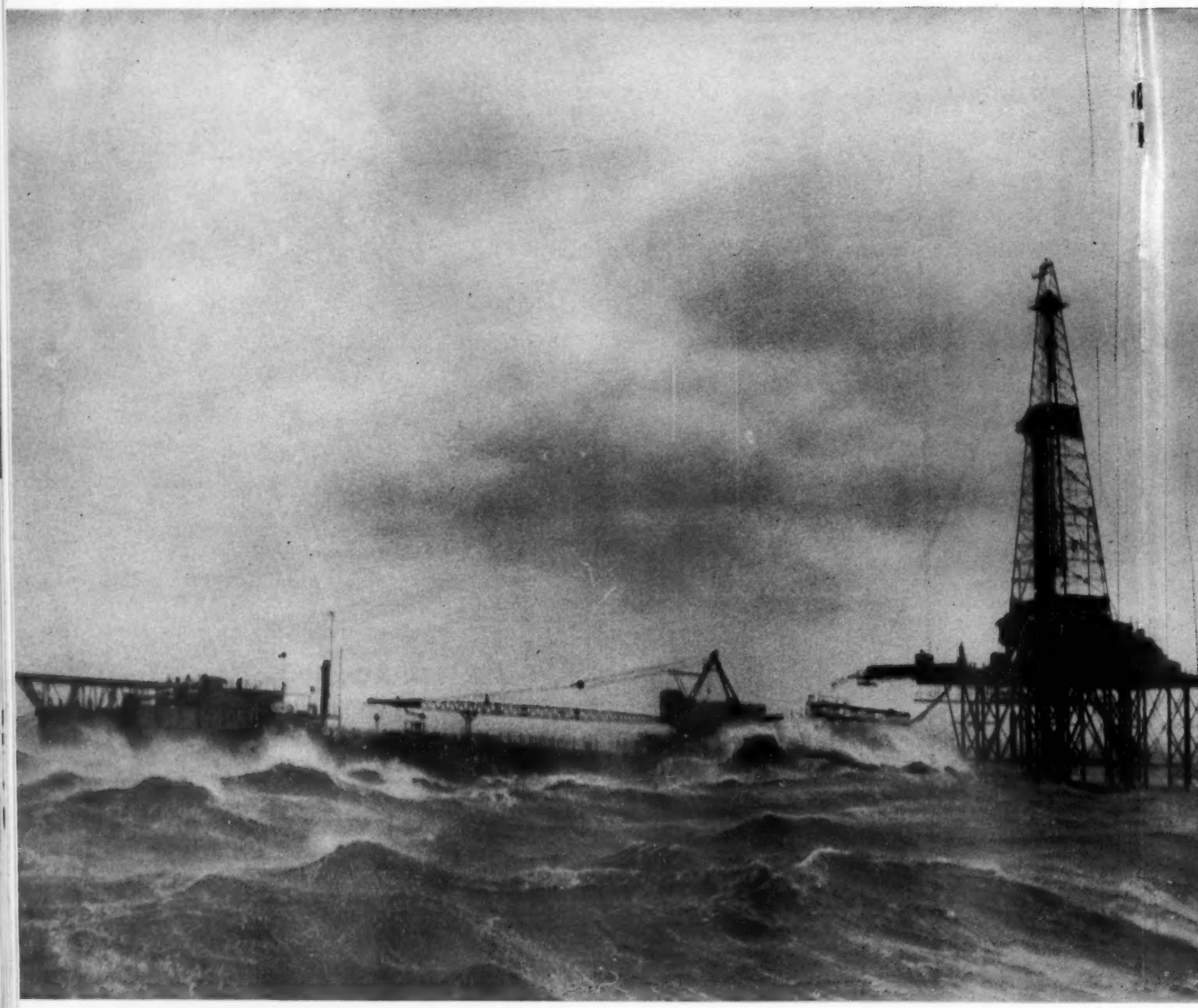

Winter's Worst Storm

Dramatic photograph reveals tender's titanic struggle to cling to its moorings in 75 mile-per-hour wind

THE worst winter storm in the history of Gulf drilling operations struck the coast of Louisiana and Texas early this year. At 6 a.m. on the morning of January 18, this offshore location was experiencing southeasterly winds from 10 to 15 miles per hour, and 2 and 3-foot waves from the southeast. By three o'clock in the afternoon (the approximate time this picture was taken) the wind was out of the west-southwest, and had reached a velocity of 70 to 75 miles per hour. Waves were running 20 to 25 feet.

Meteorological-Oceanographic Services In Offshore Operations

by A. H. GLENN
A. H. Glenn & Associates

A FEATURE of offshore operations on the Louisiana and Texas coasts which distinguish them, engineering-wise, from earlier water operations in Lake Maracaibo and the bays of the Gulf coast is their exposure to open ocean wave action.

A substantial percentage of the equipment and operating cost of the present Gulf coast offshore operations is directly attributable to wave action. Since many engineering problems in offshore work require knowledge of wave conditions, one of the technical services which has developed in conjunction with offshore work is meteorological-oceanographic consulting services. The application of meteorology, the science of weather, and oceanography, the sciences of the ocean, to offshore operations is now virtually industry-wide. Some examples may serve to illustrate the use of these sciences.

In designing platforms, a major consideration is the height of the most severe wave action and the forces such waves will exert on the platform. Figure 1 shows the profile of the maximum hurricane wave computed for a site in the Battledore Reef field (Louisiana). The contours indicate horizontal forces in pounds per lineal foot exerted by the wave on an 18-inch cylinderical pile. The designer lays out the platform to scale on such diagrams and then computes the overturning moment and shear forces exerted by the wave in various positions with respect to the platform. Improvements in Solitary Wave Theory made recently indicate that the drag forces of Figure 1 should be reduced slightly.

In determining optimum platform orientation to minimize roll of tenders, and to estimate lost time caused by wave action, the normal distribution of wave heights must be known. Figure 2 is a Baillie-type wave rose showing the annual distribution of wave heights by directions at Grand Isle Blocks 16 and 18 (Louisiana).

Since most operational decisions in offshore work hinge on the outcome of the weather, and since some weather conditions present a safety hazard in offshore work (i.e. hurricanes, line squalls, severe northers, severe winter storms) short range (48 to 72 hour) wave and weather forecasting services are in general use by offshore drilling and production operators.

Figure 3 shows meteorologists preparing wave forecasts and employing the weather charts transmitted on the Weather Bureau-Air Force-Navy weather facsimile circuit, a nationwide communication circuit similar to the telephoto networks. Government weather teletype services are also utilized. In addition, accuracy in wave forecasting is improved by daily receipt of reports on wave height and direction, wind speed and direction, and weather conditions from twenty-eight (as of June 15, 1955) offshore drilling locations between Breton Sound, Louisiana and Baffin Bay, Texas.

Figure 4 shows a reproduction of the third advisory issued on the tropical disturbance which intensified to the tropical storm designated as BARBARA (1954). The advisory was relayed to offshore operators approximately 18 hours before the disturbance intensified.

Figure 5 is a reproduction of one of the special weather bulletins issued on the severe storm of January 18, 1955. This storm moved southeast over Texas and intensified to become the worst winter storm of record in Texas-Louisiana offshore operations as it continued moving east over south Louisiana. It caused westerly swells 30 feet in height at deep water locations (greater than 60 foot depths) off the southeast Louisiana coast, and westerly winds of 75 mph on the afternoon of January 18. A picture accompanying this article shows a platform and tender subjected to the broadside wave action of this storm.

The economic justification of wave and weather forecasting services lies in the fact that they minimize the safety hazard and improve operational efficiency. Many

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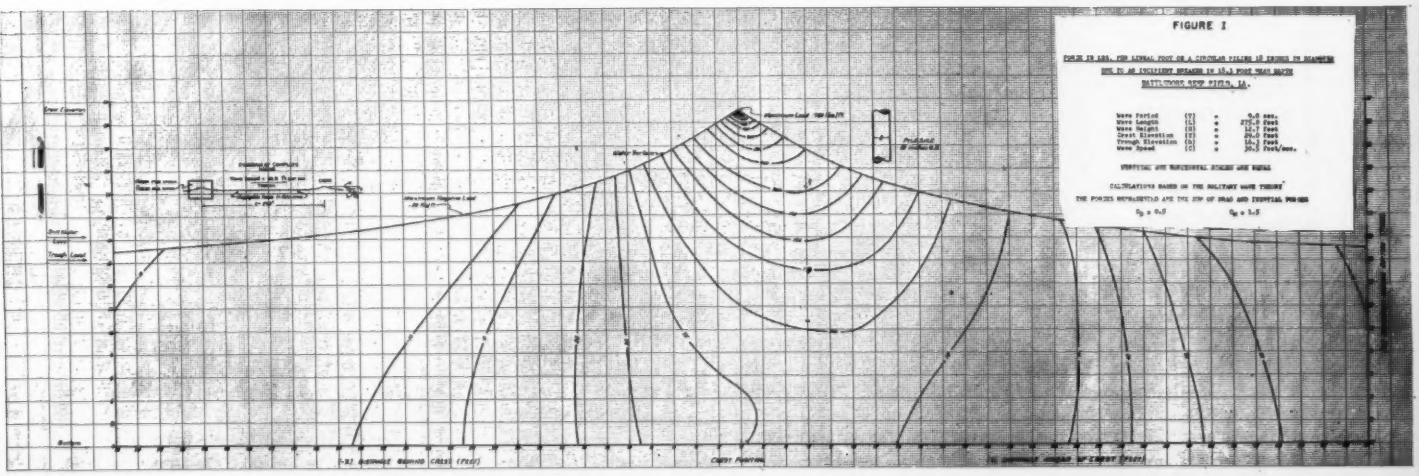

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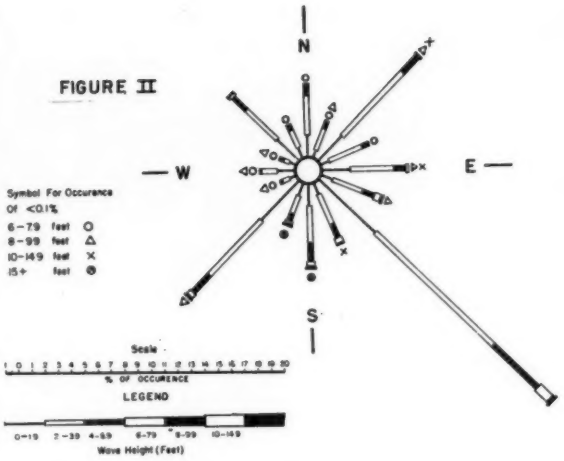
FIGURE II



ANNUAL WAVE ROSE FOR LOUISIANA STATE LEASE BLOCKS GRAND ISLE 16 & 18 (4926 OBSERVATIONS)

of the major failures in marine engineering result from storm action. In Gulf coast offshore work severe storms have caused broken anchor chains; lost ramps; barges blown adrift or ashore; barges sunk or barge cargo rolled overboard; boat, tender or platform damage caused by collision; scour action or shifting of submersible barge drilling units; lost tows; and interruption of critical work such as running casing.

The value of wave and weather forecasting services in reducing the occurence of these failures can be illustrated by an example employing the laws of probability. The toolpusher on an offshore rig watches the local weather closely in scheduling his work, but he is occasionally caught by surprise by fast moving northers, hurricanes or other severe storms that move in from beyond his range of local observation.

Assume that one out of ten hazardous storms will move in fast enough to catch his operation in a vulnerable position. The meteorologist watches the regional (within a several thousand mile radius) weather closely in preparing his reports, but his warnings are occasionally inadequate when a storm forms locally in the vicinity of the rig because of lack of local observations in that area or limitations in methods.

Assume that one out of ten hazardous storms will form locally fast enough to escape adequate detection by the meterorologist. Working without the meteorologist's warnings, the probability of the toolpusher being caught by a hazardous storm is 10 percent. The probability of the meteorologist failing to issue a warning on the hazardous storm is a mathemttically-independent 10 percent. The probability of both the toolpusher and the meteorologist failing to develop an adequate warning is the product of the two, 1 percent.

Thus, the use of the meteorologist's services has reduced the hazard from being caught in one storm out of ten to being caught in one storm out of one hundred. The fact that most of the drilling operators and construction contractors operating off the Texas-Louisiana cost make systematic use of wave and weather forecasting services is operational verification of this mathematical example.

ACKNOWLEDGEMENT

The author wishes to acknowledge the work of Dr. R. O. Reid, Department of Oceanography, Texas A. & M. College, in the preparation of Figure 1.

FIGURE 4

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ON OUTVOOK BAY MARCHAND SHOULD READ
5
10/1583 XXX 10/15 SE DEC 6/8 SE BY 6 PM TKVRS
DID U REC TKBS OK HAVING MACHINE TRBLE HERE
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WILL CALL ON PHONE ON TKMTB MIN FOR TROP
DIST ADVISORY
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TROPICAL DISTURBANCE ADVISORY NO D—3
ISSUED 3:30 PM CST, JULY 27, 1954.
TROPICAL STORM LOCATED AT 12.30 PM CST, JULY 27 AT 27.3 N, 91.5 W, OR APPROXIMATELY 225 MILES SSE OF LAKE CHARLES, AND MOVING W, 17 MPH.
FORECASTED MOVEMENT FROM 3.30 PM CST, JULY 27 TO 6.30 AM CST, JULY 28, W 15/20 MPH.
LOCATION BASED ON LAND STATION AND SHIP REPORTS. NO AIRCRAFT RECONNAISSANCE OF DISTURBANCE NOW BEING MADE. CENTER LOCATION IN PREVIOUS ADVISORY IS REVISED BECAUSE OF ADDITIONAL SHIP REPORTS RECEIVED. MAXIMUM WINDS 60 MPH IN SQUALLS ON SE SIDE OF CENTER. OTHERWISE WINDS 30/40 MPH AROUND CENTER. INDICATIONS ARE THAT DISTURBANCE WILL CAUSE INCREASING E TO SE WIND AND SWELLS ON LA. COAST TONIGHT. OVER SE LA. WIND EXPECTED TO INCREASE TO E 30/40 MPH TONIGHT AND SHIFT TO SE 40/50 MPH EARLY WED. MORNING. OVER SW LA. WIND EXPECTED TO INCREASE TO NE 20/30 MPH TONIGHT AND SHIFT TO E 30/40 MPH EARLY WED. MORNING. E TO SE SWELLS EXPECTED TO INCREASE TO 10/15 FEET AT WELL EXPOSED OFFSHORE LOCATIONS ON CENTRAL AND SE LA. COAST TONIGHT. TIDE IS EXPECTED TO RISE 3 TO 4 FEET ABOVE NORMAL ON SE LA. COAST TONIGHT AND ON SW LA. COAST TOMORROW. STORM IS NOW IN FORMATIVE STAGES AND ESTIMATES OF FUTURE MOVEMENTS, INTENSITY, AND SEA CONDITIONS ARE BELOW AVERAGE IN RELIABILITY. NEXT ADVISORY AT ABOUT 6 PM UNLESS SIGNIFICANT REPORTS RECEIVED SOONER. OFFICE OPEN ALL NIGHT FOR INQUIRIES.
MINIMUM EVACUATION PERIOD 6 HRS HOURS.
FORECASTED EVACUATION PERIOD 6 HOURS.
D DID U REC OK GAS YES

FIGURE 5

T NO MORGAN CITY 69 COLLECT PLS
V MGN CY 69
THIS IS MORGAN CITY 69 A A COL CALL
OK COLLECT
A H GLENN AND ASSOC NO LA

(Continued on page 43)

FIGURE 3—Preparation of wave and weather forecasts for offshore operators using charts transmitted by Weather Facsimile. Sixty plotted, analyzed weather charts are transmitted daily on this circuit from the Weather Bureau-Air Force-Navy Weather Central in Washington, D. C.

GENERAL MARINE FABRICATION

The CHANNEL MASTER

Featuring the Gulf Master Series

The CHANNEL MASTER is a 40′ welded steel crewboat built for Mr. Lewis Harkey of Slidell, La., by Gulf Master Boats, Inc. of Slidell.

Powered by two 6-71 GM diesels supplied by George Engine Company of Harvey, La., the CHANNEL MASTER has a top speed of over 27 mph.

Gulf Master Boats are noted for their stability and level ride. Capable of carrying heavy loads of crews while maintaining high cruising speeds, they are extremely seaworthy. The CHANNEL MASTER is the second Gulf Master Boat built for Mr. Harkey.

The Gulf Master series is available in 30′, 38′, 40′, 45′, 52′ and 65′ lengths.

Repairs — New Construction
Crew Boats, Barges, Tugs

Gulf Master Boats, Inc.

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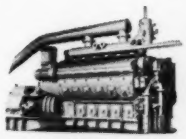
Sub-Motor-DC-1375 HP. 415 V. 1300 R.P.M.



12-567 GM Diesel

10—Sub motors-DC- 1375-H.P. 415 Volts, 1300 R.P.M.
4—1200 K.W. 750 R.P.M.—525 Volts, Allis Chalmers—Gen. DC.
2—12-567—G.M. Engines—Port and Starboard
6—1000 H.P. model—540 Alco—Diesel Engines—Port and Starboard
3—671—60 K.W. G.M. Diesel Generator Units

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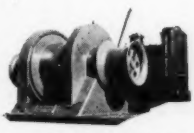

Jaeger Winch with GM 471

GM 671-60 KW Generator Unit

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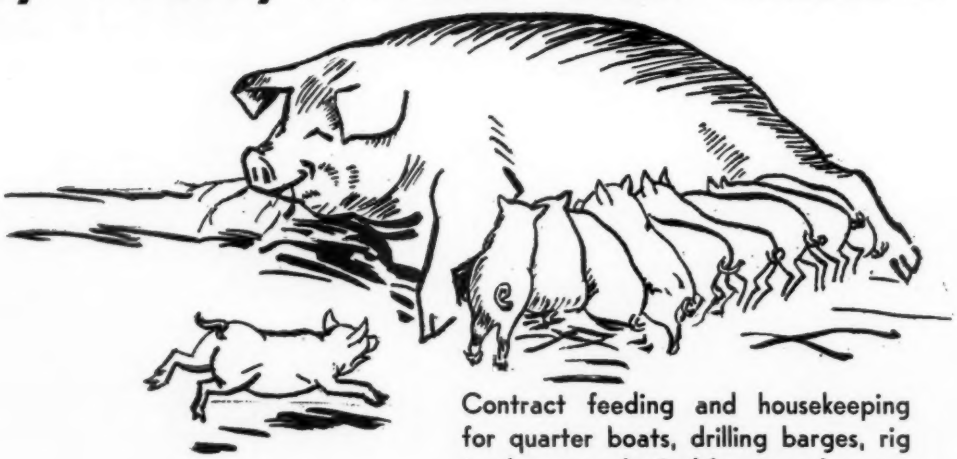

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Mobile Units And Tenders

Gulf Coast Area

Mobile Rigs In Operation

OWNER	Name	Water Depth	Present Status
Kerr-McGee Oil Ind., Inc. Barnsdall-Hayward Design, 13′ x 54′ x 160′, with two 13′ x 14′ x 110′ pontoons	Rig 40	17-18′	On CATC location, Block 84, West Delta area
Kerr-McGee Oil Ind., Inc. Hayward-Wolff Design, 13½′ x 72′ x 140′ with two 13½′ x 13½ x 140′ pontoons	Rig 44	29′	Drilling for Forest Oil Co., Block 4, East Cameron
Ocean Drilling & Exploration Company Hayward-Laborde Design, 14′ x 74′ x 220′, with 10′ x 30′ x 50′ pontoons (2)	"Mr. Charlie"	22′	Drilling for Shell, Block 30, South Pass Area
California Company 11′ x 60′ x 140′, with four 3′ x 10′ x 35′ pontoons	S-44		South Pass, Louisiana
The Offshore Company DeLong Design, 8½′ x 70′ x 203′ with 12 6′ dia. cassions	Mobile Unit No. 1		Leased to Humble, at Grand Isle
The Offshore Company Delong Design, 13½′ x 117′ x 220′, with 14 6′ dia. cassions	Mobile Unit No. 2	44′	Drilling for Pure, Roll-over, C-1
American Tidelands, Inc. Alexander Shipyard Design, 12′ x 74′ x 200′ with four pontoons	"101"		Capsized, sunk about 2½ miles off Grand Isle, La.
C. G. Glasscock Drilling Co. Bethlehem Design, 15′ x 80′ x 225′	"Mr. Gus"	40′	Drilling for Shell, Port Aransas, Texas
Ocean Drilling & Exploration Company Hayward-Laborde Design 10′ x 120′ x 180′	"John Hayward"	24′	Drilling for Shell, Block 16, Cameron area
Penrod Drilling Company Levingston Design, 10′ x 72′ x 220′, drydock with rig in place	—		Leased to Phillips, drilling Union & Kerr-McGee Well, Block 47, Main Pass Area

(Continued on page 38)

The KERMAC I, purchased by U. S. Oil of Louisiana & Texas from Kerr-McGee, is shown loaded with fuel, water and pipe, ready to depart for an offshore rig in the Cameron area.

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Four of these 135-foot twin-screw all-steel welded diesel cargo boats will soon be serving offshore operators in the Gulf of Mexico. Designed to carry 3500 barrels of drilling water to offshore rigs and haul oilfield supplies, they will also do offshore towing of drilling barges and act as standby tugs. Approved for coastwise operation, they may be used anywhere in the Gulf of Mexico or Caribbean.

Now under construction at the Arnold V. Walker Shipyard in Pascagoula, Miss., two of these versatile 135-foot supply ships will be ready for service in late May.

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Oil Man's Calendar

July

19-21 AMERICAN PETROLEUM INSTITUTE (Committee on Agriculture annual business meeting and field trip), Oregon State College, Corvallis, Oregon.

20-23 Silver Bay Conference on Human Relations in Industry, Silver Bay, N. Y.

AUGUST

15- AMERICAN PETROLEUM INSTITUTE (OIIC Steering Committee meeting), Biltmore Hotel, New York, N. Y.

15-16 North Dakota Oil & Gas Assn. (annual meeting), Bismarck, N. D.

15-17 Society of Automotive Engineers (West Coast meeting), Hotel Multnomah, Portland, Oregon.

15-19 American Institute of Electrical Engineers (Pacific general meeting), Butte, Montana.

21-26 National Congress of Petroleum Retailers (9th annual session), Sheraton-Cadillac, Detroit, Michigan.

25-28 American Society of Chemical Engineers (national meeting), Lake Placid Hotel, Lake Placid, N. Y.

SEPTEMBER

8-9 AMERICAN PETROLEUM INSTITUTE (OIIC meeting), Conrad Hilton Hotel, Chicago, Illinois.

11-13 Independent Natural Gas Association of America, Jasper National Park, Canada.

12-14 American Institute of Electrical Engineers (Electrical Conference of Petroleum Industry), Shamrock Hotel, Houston, Texas.

12-15 Society of Automotive Engineers (tractor meeting), Hotel Schroeder, Milwaukee, Wisconsin

12-16 Instrument Society of America (10th Annual Conference and Exhibit), Shrine Auditorium and Convention Hall, Los Angeles, California.

14 -AMERICAN PETROLEUM INSTITUTE (Division of Marketing, Lubrication Committee), Traymore Hotel, Atlantic City, New Jersey.

14-16 National Petroleum Association (53rd annual meeting), Traymore Hotel, Atlantic City, New Jersey.

15-16 Florida Petroleum Marketers Association, Daytona Plaza, Daytona Beach, Florida.

20-21 AMERICAN PETROLEUM INSTITUTE (Executive Committee meeting), Greenbrier Hotel, White Sulphur Springs, West Virginia.

22-23 Mid-Continent Oil & Gas Association (La.-Ark. Division annual membership meeting), Roosevelt Hotel, New Orleans, Louisiana.

22-23 Western Petroleum Refiners Association (Regional Technical-Industrial Relations Meeting), Hotel Henning, Casper, Wyo.

25-28 American Institute of Chemical Engineers, Lake Placid Club, Lake Placid, N. Y.

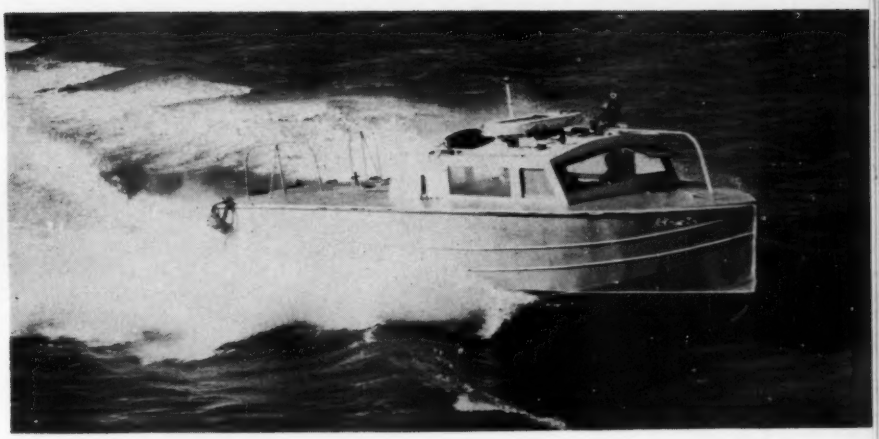
25-29 American Society of Mechanical Engineers (annual meeting), Roosevelt Hotel, New Orleans, Louisiana.

26-27 Independent Oil Compounders Association (annual meeting), Hotel Bismarck, Chicago, Illinois.

26-28 American Association of Oilwell Drilling Contractors (15th annual meeting), Rice Hotel, Houston, Texas.

27-28 Ohio Petroleum Marketers Association, Inc. (Fall Conference and Golf Tournament, Netherland Plaza and Maketewah Country Club, Cincinnati, Ohio.

News from the
SHIPYARDS



Powered by P&H . . .

Crew Boat Attains Top Speed At Low RPM

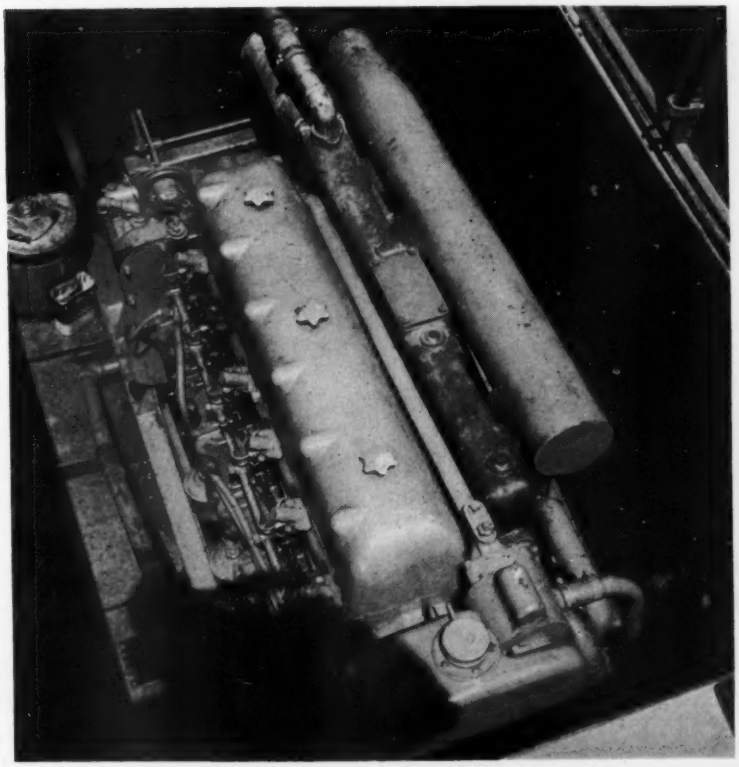
New P&H diesel marine engine gives 32-footer speeds in excess of 25 mph at only 1650 rpm

A NEW 32-foot crew boat, designed and built by Platzer Boat Works, Inc., of Houston, Texas, and powered with a 206 hp P&H diesel marine engine supplied by Diesel Engine & Equipment Service Company, also of Houston, is ideally suited for service in the marine oilfields.

The sturdy, all-steel crew boat is exceptionally seaworthy. Its design and angle of attack insures a level ride in rough water. In test runs in the open Gulf, in 4-foot seas, the boat ran level with wide open throttle without discomfort to personnel.

But the remarkable feature of the Platzer crew boat is the fact that it attained speeds in excess of 25 mph

(Continued on next page)



Top: This Platzer-built 32-foot crew boat attains speeds in excess of 25 mph with an engine rpm of only 1650.

Right: A unique service feature of this new P&H diesel marine engine is the fact that it is designed to be serviced without removal from the vessel. One man can replace all moving parts, including rod bearings, in 40 minutes per cylinder.

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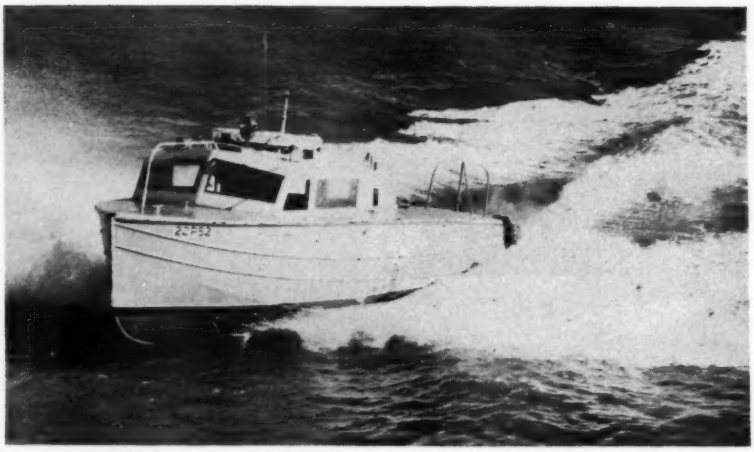
NEW ORLEANS GALVESTON



The 32-footer is exceptionally seaworthy. Its design and angle of attack insures a level ride in rough water.

with a low engine rpm of only 1650. The 32-footer cruises at 22 mph at approximately 1500 rpm—an important factor in prolonging engine life and cutting down on engine repairs.

Dimensions . . . With a length overall of 32 feet, the single-screw personnel transport has a 10'6" beam and 36" draft. Originally equipped to seat 10 oilfield workers, some of the seats have been taken out to put in a bunk, and the boat now carries 5 passengers with crew accommodations for one.

Owned by Platzer Boat Works, Inc., and leased to A. G. Middleton & Sons of Houston, the boat is now working with a marine rig in Matagorda Bay, in the Port Lavaca area.

Features . . . Completely equipped down to a 5-man life raft, the 32-foot crew boat has these additional features: 5-in. spherical compass, non-magnetic steering wheel, $C\text{-}O_2$ fire extinguisher, and non-glare glass in windows and windshield. It also has four watertight compartments—unusual in a small boat.

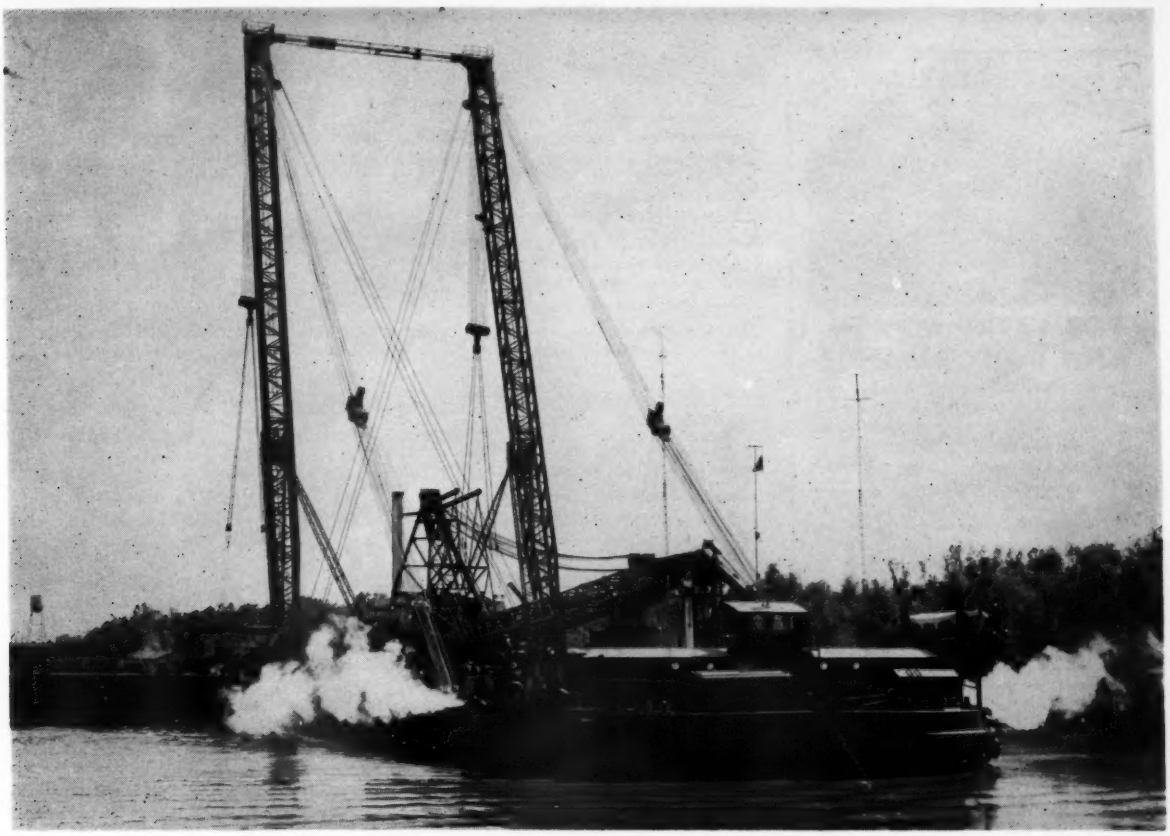
Power . . . Propulsion is furnished by a 6-cylinder P&H diesel marine engine rated at 206 hp at 1800 rpm. The engine drives an L. L. Walker 23" x 17" 3-blade "Hydroplane" wheel through a Snow-Nabstedt gear at a 1:1 ratio.

The new P & H engine . . . The new P & H marine engine, Model 687-C-18, has the highest horsepower per pound of weight of any American manufactured diesel engine. All major parts are of "aircraft metals," with a higher tensile strength than steel.

A unique service feature of the engine is the fact that it is designed to be serviced without removal from the vessel. One man can replace all moving parts, including rod bearings, in 40 minutes per cylinder.

The engine has one-third less parts than other engines of comparable hp.

The boat has non-glare glass in windows and windshield. It also has four watertight compartments—unusual in a small boat.



Sinews of steel

Mammoth Derrick Barge Has 800-Ton Lift

Third marine giant built for J. Ray McDermott & Company by Avondale

J. RAY McDERMOTT & COMPANY, INC., marine contractors of Harvey, La., recently added the world's largest derrick barge to an already impressive list of heavy marine equipment.

Built at a cost of $2 million by Avondale Marine Ways., Inc., of New Orleans, McDermott Derrick Barge No. 9 ranks with two other barges owned by the company—No's. 7 and 8—as the world's largest revolver-type derrick barge, with a lift of 250 tons. But equipped with its special "800-ton gear," No. 9 has lifted weights of that magnitude.

Previously, the heaviest load that man has been able to pick up by block and fall has been somewhere between 450 and 500 tons. The tremendous increase in the lifting capacity of Derrick Barge No. 9 is attributable to its 800-ton gear. This special gear is comprised of two stationary booms 240 feet in length, and changes the barge from a 250-ton revolver-type derrick barge into the world's largest marine derrick barge.

Actually, the honor can be shared by two of the McDermott derrick barges, both built by Avondale.

Derrick Barge No. 8 is similar in design and size to No. 9, and the 800-ton gear is interchangeable between the two. With it either derrick barge can lift 800 tons.

The two derrick barges get their real muscle from identical hulls, which measure 300′ in length by a width of 90′ and a depth of 19 feet —513,000 cubic feet of steel and machinery.

The main generator sets for both Barge No. 8 and No. 9 were built by Reagan Equipment Company, of New Orleans. The 200 kw, 3-phase, 480-volt generators are powered by Waukesha Model LRDBS 900 rpm turbo-charged diesel engines.

In addition to these marine giants, J. Ray McDermott & Company operates a wide variety of other floating equipment ranging upward from their 75-ton revolving derrick on Barge No. 5. Barge No. 10, now under construction at Avondale, will be a 100-ton revolving derrick designed to do smaller jobs quickly. All of the McDermott derrick barges are built for work at sea.

"Firsts" are nothing new to this Harvey, La., marine contracting firm. McDermott built the initial offshore jacket-type structure, and laid the first offshore pipeline.

If you need a lift offshore, McDermott can give it to you—anything up to 800 tons!

A PROVEN DESIGN . . .

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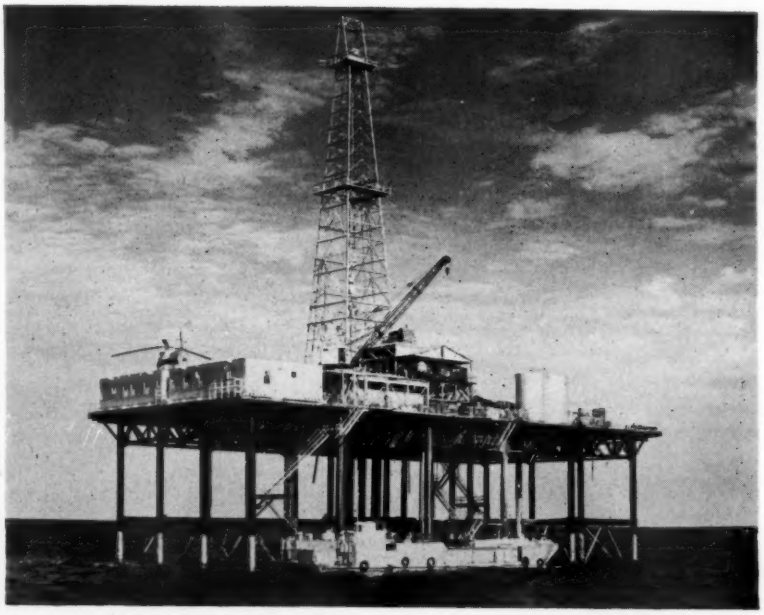
Mobile Rigs Under Construction

(Continued from page 33)

Owner	Name	Depth Potential	Present Status
The Offshore Company 12′ x 74′ x 200′, with four 6′ dia. cassions and four Delong jacks	Mobile Unit No. 3		Alexander Shipyard, to be completed July, 1955
Zapata Offshore Company LeTourneau Design, 20′ x 80′ x 140′, with three triangular legs.	—		LeTourneau-Vicksburg, to be completed July, 1955
The California Co. 12′ x 90′ x 190′, with four 4′ x 24′ x 50′ pontoons	S-55		Being constructed

Drilling Tenders

Owner	Name	Water Depth	Present Status
CATC **Continental Oil Company** **Atlantic Refining Company** **Tidewater Assoc. Oil Co.** **Cities Production Corp.** New tender, 260′ x 54′	"J. C. Craig"	56′	Block 59, B-1, West Delta Area, Louisiana
Same Companies as above New tender, 260′ x 54′	"Carle Sharp"	50′	Block 49, A-2, East Cameron Area, Louisiana
Same Companies as above New tender, 260′ x 54′	"Ernie Miller"	50′	East Cameron, Block 73, Well B-2
Same Companies as above New tender, 260′ x 54′	"Jack Cleverley"		Christened 6-4-55
The California Company Converted LST, 328′ x 50′	S-21	42′	West Delta, Louisiana
The California Company Converted LST, 328′ x 50′	S-22	37′	Bay Marchand, Louisiana
The California Company Converted LST, 328′ x 50′	S-23	24′	Main Pass, Louisiana
The California Company LST, 328′ x 50′	S-24	62′	South Pass, Louisiana
The California Co. LST, 328′ x 50′	S-25		Being converted
The California Co. LST, 328′ x 50′	S-26		Being converted
Gulf Oil Corporation Converted LST, 328′ x 50′	"Eagle"	60′	Block 154, Ship Shoal Area, with Penrod rig
Gulf Oil Corporation New tender, 272′ x 60′	"Pelican"	65′	Block 104, East Cameron area, Salt Dome rig
Humble Oil & Refining Co. Converted LST, 328′ x 50′	ST-1		Not in service



CATC's self-contained drilling platform in 95 feet of water off the coast of Grand Isle—the deepest water in which man has drilled in his search for oil.

Humble Oil & Refining Co. Converted LST, 328′ x 50′	ST-2		Not in service
Humble Oil & Refining Co. Converted LST, 328′ x 50′	ST-3		With company rig at Grand Isle, Louisiana
Humble Oil & Refining Co. Converted LST, 328′ x 50′	ST-4		Grand Isle Area
Humble Oil & Refining Co. Converted LST, 328′ x 50′	ST-5		Grand Isle Area
Humble Oil & Refining Co. Converted LST, 328′ x 50′	ST-6		Grand Isle Area
Humble Oil & Refining Co. Converted LST, 328′ x 50′	ST-7		Grand Isle Area
Humble Oil & Refining Co. Converted LST, 328′ x 50′	ST-8		Grand Isle Area
Kerr-McGee Oil Ind., Inc. Converted YF, 260′ x 48′	"Kermac I"	43′	Drilling for Standard of Texas at Aransas Pass
Kerr-McGee Oil Ind., Inc. New tender, 250′ x 48′	"Kermac II"	42′	Drilling for Pure on Block 99, West Cameron Area, with Rig 43
Kerr-McGee Oil Ind., Inc. Converted YF, 260′ x 48′	"Frank Phillips"	65′	Block 54 Field, S. Timbalier Area, Humble rig
Phillips Petroleum Company Converted YF, 260′ x 48′	"K. S. Adams"	32′	Drilling for Phillips at East Cameron, Louisiana
Magnolia Petroleum Company Converted YF	MDT-1	20′	Block 89, Eugene Island Block 110 Field
Magnolia Petroleum Company Converted YF	MDT-2	35′	Well G-1, Eugene Island Block 126 Field
Magnolia Petroleum Company Converted YF	MDT-3	25′	Well G-3, Block 94, Eugene Island Block 110 Field
Magnolia Petroleum Company Converted YF	MDT-4	52′	Well A-1, Ship Shoal Block 113
Magnolia Petroleum Company Converted YF	MDT-5	50′	Well B-1, Block 129, Eugene Island Block 45 Field
Magnolia Petroleum Company Converted YF	MDT-6	35′	Well I-1, Block 119, Eugene Island Block 126 Field
Magnolia Petroleum Company Converted YF	MDT-7	50′	Well A-1, Block 128, Eugene Island Area
Pure Oil Company Converted LST, 328′ x 50′	"R. W. McIlvain"	60′	With Carl Short rig at Galveston, Well A-2
Stanolind Oil & Gas Co. Converted LST, 328′ x 50′	No. 50		Block 144, B-1, Galveston Area

Self-Contained Platforms
Gulf Coast Area

Company	Description	Year Built	Location	Depth of Water
CATC Continental Oil Co. Atlantic Refining Co. Tidewater Assoc. Oil Co. Cities Production Corp.	220′ x 106′	1955	Block 47 Grand Isla, La.	95′
Humble Oil & Refg. Co.	110′ x 206′	1947	Block 18 Grand Isle, La.	50′
Magnolia Petroleum Co.	75′ x 398′	1954	State Tract 10, S.W. of Sabine Pass, Texas	30′
Magnolia Petroleum Co.	52′ x 168′	1948	Block 119 Eugene Island Area, Well H-5	35′
Pure Oil Co.	100′ x 80′	1948	Block 32 Eugene Island, La. Loffland Bros. rig, Well E-3	14′
Stanolind Oil & Gas Co.	85′ x 195′	1955	Block 24 (Caillou Bay) Ship Shoal area	7′
Shell Oil Company	82′ x 197′	1955	Block 42, South Pass, La., (Loffland Bros. rig)	72′
Western Natl. Gas Co.	52′ x 136′	1954	State Tract 608, S.E. Port O'Connor, Texas	43′
The California Co.	"J" Structure	1955	Block 3, Bay Marchand, La.	

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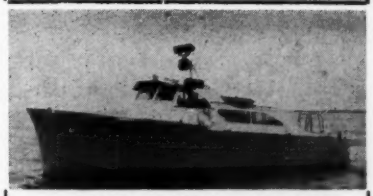

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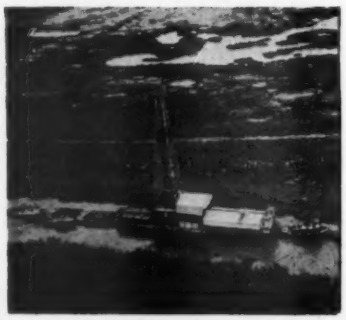

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Marine Oil Industry

Shipyard Round-Up

ALEXANDER SHIPYARD, New Orleans:

Mobile Unit No. 3, under construction for the Offshore Company of Baton Rouge. Measurements: 12′ x 74′ x 200′, with four 6′ dia. caissons and four DeLong jacks.

Arnold V. Walker Shipyard, Pascogoula:

135-foot offshore cargo vessel under construction for Sea Service, Inc. Walker-Henderson design. Measurements: 135′ long, 32′ wide and 10′6″ deep. Power: Two 600 hp diesel marine engines. Vessel will do offshore towing of drilling barges and tenders, act as standby tug, haul oilfield supplies. Designed to carry 3500 barrels of drilling water to offshore rigs, haul two large stacks of range 3 drill pipe. Completion date: July 30, 1955.

135-foot offshore cargo vessel delivered June 30 to Sea Service, Inc.

85-foot offshore work boat under construction.

Three 80-foot crew boats under construction.

160-foot rig tender (conversion).

Two 80-foot barge units (for well testing).

Avondale Marine Ways, New Orleans:

Portable offshore drilling barge, under construction for The California Company. Friede & Goldman design of the elevated-deck, self-stabilzing type, similar to The California Company's **S-44.** Measurements, lower hull: 190′ x 150′ x 12′. Measurements, upper structure: 180′ x 90′.

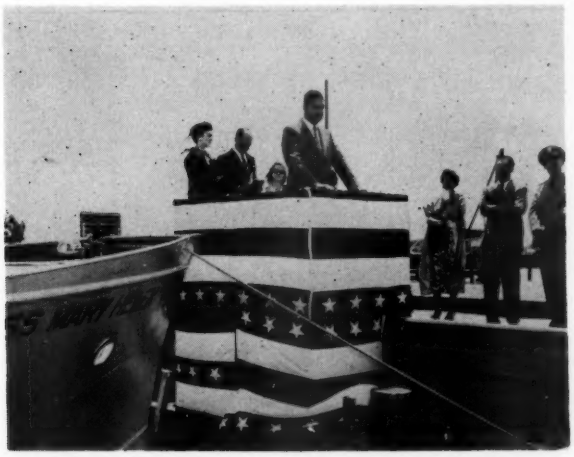
Completion date: Fall.

Bludworth Shipyard, Houston:

Crew boat under construction for Hopson Marine Service, of Mission, Texas. Similar to the **Irene H,** recently delivered to Hopson. Measurements: 64′6″ x 16′3″ with draft of 5 feet. Aircraft-type seats for 25 oilfield personnel.

Burton Construction & Shipbuilding Co., Inc., Port Arthur:

7000-barrel oil barge under construction for the Port



Vincent Robin III, of Robin Boat Rental Service, addresses guests at christening ceremonies for the MISS MARY HELEN. The 51-foot crew boat, built by the Equitable Equipment Company, of New Orleans, is the 20th offshore vessel to join the Robin fleet. On the speaker's stand, from left to right, are Miss Marian Robin, sponsor; W. P. Oster, vice-president, Equitable Equipment Co.; Miss Mary Helen Stall, after whom the boat was named; and Mr. Robin. Watching from the dock are Mrs. Robin, David P. Levy, and Commander S. H. Ray.

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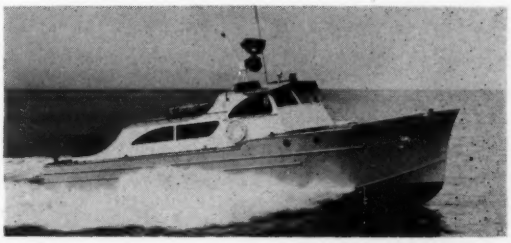

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The MISS MARY HELEN, radar equipped 51′ personnel transport, is capable of carrying 40 passengers at speeds up to 23.4 mph. The MISS MARY HELLEN typifies the fine marine equipment owned and operated by Robin Boat Rental Service. Built by Equitable Equipment Co., Inc., of New Orleans, the MISS MARY HELEN is No. 20 for Robin. Three other 51′ crew boats — the ERLINE, MARGARET and the HELEN L — have been built for Robin by Equitable in the past twelve months.

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64-foot pilot boat under construction for the Sabine Pilots. Powered by two G.M. 6-110's.

120-foot self-propelled barge under construction for Twenty Grand Towing Company.

124-foot self-propelled barge under construction for the Falgout Boat Contracting Company.

Equitable Equipment Company, New Orleans:

131-foot offshore supply vessel under construction for The California Company. 32′ beam. Twin-screw. 900 bhp.

Gulf Master Boats, Inc., Slidell, Louisiana:

Twin-screw 55-foot crew boat for E. T. Calonne of New Orleans. 600 hp. Thirty-two passengers, two crews.

Gulfport Shipbuilding Corporation, Port Arthur:

Hull No. 469, 65′ x 34′ combination derrick and pipe driver barge. Twin-screw, self-propelled.

Hull No's. 472 and 473, 110′ x 30′ x 7′ deck cargo barges.

Converting 133′ x 30′ x 12′ Navy hull to buoy tender for Creole Petroleum Corporation, Venezuela. Twin-screw. Power: Two 400 hp Enterprise diesels.

Harms-Smaihall Shipyard, Orange:

65-foot utility vessel under construction. Twin GM 6-110's.

Higgins, Inc., New Orleans:

Awarded contract by major oil company for large offshore structure.

Hunt Tool Company Marine Division, Harvey:

Diesel electric drilling barge, **The Henry Bell,** delivered June 21 to Bateman Drilling Company. First drill barge to be equipped with a standard-package electric power plant (by Alco Products, Inc.).

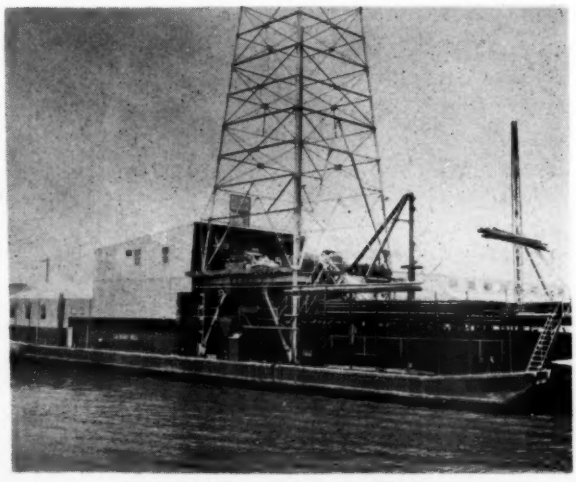
Drill barge under construction for Dixie Drilling Company, 215′ x 45′.

Converting Y-F barge, drill tender for Zapata.

Levingston Shipbuilding Company, Orange:

$1.5 million drilling tender, **Jack Cleverley,** delivered to CATC Group. The vessel measures 260′ long by 54′ wide, and is similar in design to the **Ernie Miller,** recently delivered to CATC.

J. & S. Shipbuilding Corporation, Slidell, La.:



This diesel-electric drilling barge, The HENRY BELL, was built by Hunt Tool Company's Marine Division in Harvey, La., and delivered June 21 to Bateman Drilling Co.

Oil barge under construction. Capacity: 13,000 barrels. Measurements: 155'6" x 50' x 10'3".

75' twin-screw 880 hp tug.

Lockport Shipyard, Lockport, Louisiana:

Sixty-five foot tug under construction for the Independent Towing Company, of Harvey. Power: GM 6-110 diesel engines.

Marine Construction Company, Patterson:

Twin-screw 65-foot offshore utility boat under construction.

Platzer Boat Works, Houston:

Construction to start soon on 93' offshore crew boat.

R. G. LeTourneau, Inc., Vicksburg:

Mobile drilling platform, under construction for the Zapata Offshore Company. LeTourneau design. Measurements: 20' x 80' x 140 feet, with three triangular legs.

Completion date: August, 1955.

Sewart Seacraft, Berwick:

Crewboat **Gulf Stream** under construction for Arthur Levy of Berwick. Measurements: 87' x 23' x 6'. Twin-screw diesel, powered with two GM 6-110's. All-steel including cabin.

Three 50' crewboats for D & B Boat Co., New Iberia.

One 45' crewboat for Templet White of Morgan City.

One 45' crewboat for Charles Druery of Berwick.

One 40' crewboat for S. J. Malbourgue of Gulfport, Miss.

Three 30' crewboats for United Gas Company.

Four 30' Jo-boats for Texas Company.

Construction to start on three aluminum boats in near future, all for major oil companies.

Meteorological . . .

(Continued from page 31)

SPECIAL WEATHER BULLETIN ISSUED 5 AM
JAN 18, 1955
THE INTENSE LOW PRESSURE AREA OVER WEST TEXAS YESTERDAY IS NOW MOVING AT 35 MPH OVER THE GALVESTON-BEAUMONT AREA. THE ASSOCIATED NORTHER HAS INTENSIFIED AND ACCELERATED IN FORWARD MOVEMENT DURING THE NIRGHT. IT IS NOW MOVING SE 35 MPH PAST GALVESTON AND BROWNSVILLE. THIS IS NOW A SEVERE NORTHER WITH W TO NW WINDS 35/50 MPH AFTER NORTHER PASSES. WINDS AHEAD OF NORTHER ARE E TO SE UP TO 30/40 MPH. NORTHER EXPECTED TO REACH THE SW LA. COAST BETWEEN 5 AM AND 8 AM TODAY. REACH THE CENTRAL LA. COAST BETWEEN 8 AM AND 11 AM TODAY, AND REACH THE SE LA. COAST BETWEEN 11 AM AND 2 PM TODAY. SCATTERED THUNDERSTORMS ARE OCCURRING AHEAD OF NORTHER WITH A POSSIBILITY OF BRIEF GUSTS UP TO 60 OR 70 MPH DEVELOPING IN THE MOST SEVERE THUNDERSTORMS.
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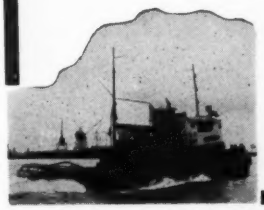

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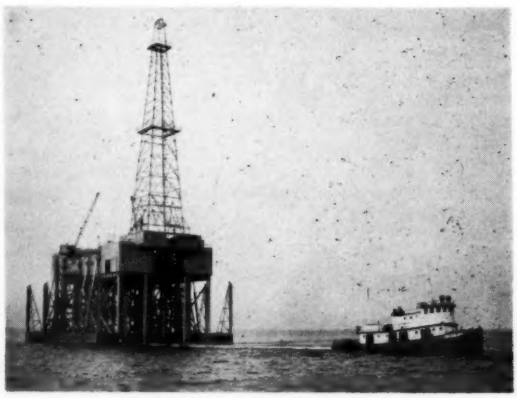

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News from the
SERVICE COMPANIES

A new marsh buggy is put through its paces. The CC tread is less damaging to marshland than other types, which makes it a favorite with trappers. Note the boats in the background.

Marsh buggies . . .

Cajan Cousins To The Muskrats

MAN'S search for oil has led him to use all manner of inventiveness. Getting personnel and heavy equipment in and out of marsh areas—where formerly only pirogues and muskrats were "native"—presented a typical challenge. The machine that has evolved, over a period of years, is as weird and wonderful as a page out of science fiction.

On a high, lurching platform, over wide slat-like treads or mammoth rubber tires, men now ride through trackless swamps and marshes almost as easily and comfortably as the housewife drives to the community grocery in the family car.

There seems to be no single inventor of the marsh buggy. It has a development similar to the automobile, with each early mechanic finding a way to overcome a weakness in the machine, or discovering some simpler method of operation.

All marsh buggies must have certain essentials in common: They must be mobile, amphibious, stable enough to stay with a 45° angle, and strong enough to take all the punishment a marsh can dish out—which is plenty. But even these qualities are not enough to insure a really practical unit.

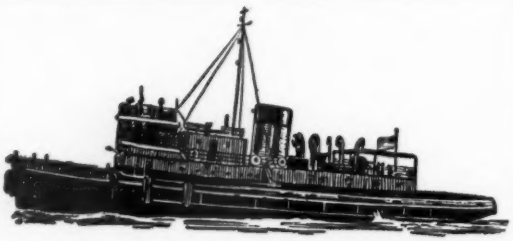
Along with these basics a marsh buggy was successfully operated with a two-wheel drive by a pioneer named Kelp. Then came a buggy by the Crane Bros. of Gueydan, La., which had a slat-wheel, two-wheel drive. Later a more practical buggy was designed by John M. Poché, with a four-wheel drive and an engine of only 22 hp.

This started four-wheel drives in the field, and the buggy was equipped with "steppers" to vault the buggy forward from a difficult situation. The "steppers" and the four-wheel drive are the revolutionary features of the modern marsh buggy.

Recently John Poché developed caterpillar tracks which are of concave construction, and confine and compress the marsh into "stepping-stones." This allows the tread to grip the marsh and support the buggy,

(Continued on next page)

A marsh buggy noses into a bayou. There seems to be no single inventor of this Cajan cousin to the muskrat. It just "grew" over the years.



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Throwing up a backwash of mud and water, a marsh buggy roars at full speed over flooded, boggy terrain. Cranes are mounted on similar buggies, for pipelining in the marshes.

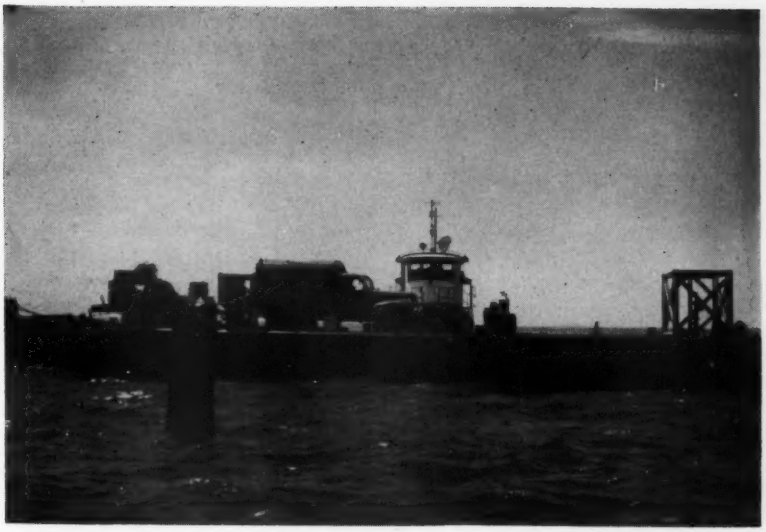
rather than letting it slip or squeeze through very soft sections.

Quality Boiler & Machine Works, Inc., of Thibodaux, La., has under construction an experimental marsh buggy with four-wheel drive, steppers and the new CC tracks. This is a joint venture of John Poché and Quality Boiler & Machine Works, of which George H. Diedrich, Jr. is general manager.

Both Diedrich and Poché believe their marsh buggy will be the most modern means of transportation offered the swamp traveler. The new CC tracks were designed to help solve the maintenance problem most critical to marsh buggies—breaking and wear of tracks. Also, the new track will have less damaging effect to marshland—an item that is bound to find favor with the trapper.

Quality now have fifteen of their pontoon-type marsh buggies operating in the marshes of southern Louisiana, and plan a bigger participation in the field. The company will also design and construct special equipment for pipelining in the marshes, and for the use of exploration companies.

This sleek amphibian was exhibited at the International Oil Exposition in Houston, Texas, in May. It was built by Quality Boiler & Machine Works, Inc., of Tridodaux, La.



Portable metallizing equipment on barge, on way to offshore location. Corrosion of wellhead structures, in particular, can be a safety problem as well as a maintenance problem.

Preventive Maintenance By Metallizing

by F. W. GARTNER, JR.
F. W. Gartner Company

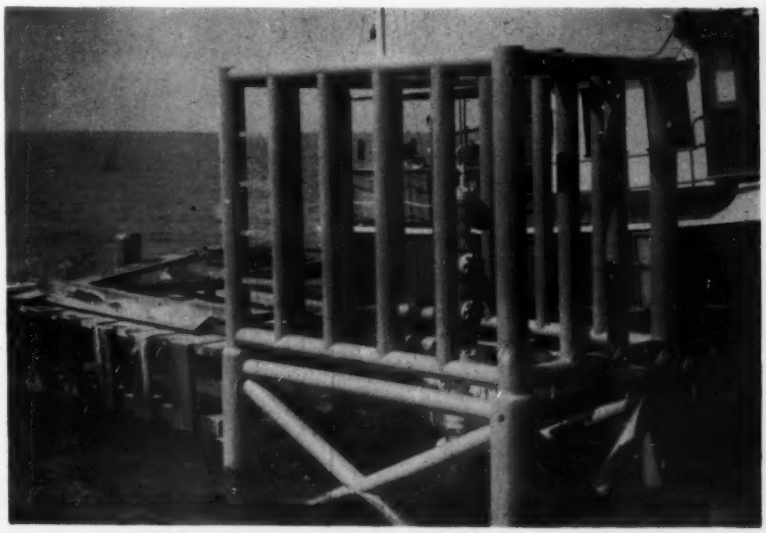
MANY times we are asked, "What is metallizing?" Let's take a few lines to explain the process. Metallizing is a process of spraying molten metal to steel surfaces for corrosion protection, for the repair of shafts that are worn, or from corrosive attacks. The process is done by a metallizing gun with the use of acetylene, oxygen, and air to burn and atomize the wire as it travels through the gun. There are various metals that can be sprayed: stainless steel, monel, copper, steel, lead, aluminum and zinc. Aluminum and zinc are commonly used in corrosion protection of iron and steel and will be the only material discussed further in this article.

The most important factor in metallizing is surface preparation. This is a must and cannot be abused if the coating is to be successful. The base material must have a thoroughly clean and roughened surface. This is accomplished by grit or sandblasting. The size of grit may be G-18 to G-40. Where it is not economical to use steel grit, sand may be used if sharp enough to leave a high anchor pattern.

With the surface correctly prepared, the next step is to select the type of metal to be used and the thickness desired for the type of service the material is to be subjected to. Many times the engineer will specify metallizing for a particular job, but will fail to state what thickness is to be sprayed, what type of metal is to be used, or fail to draw up specifications to fit the job. This causes many failures in metallizing that should not occur. For instance and I quote, "A large chemical corporation asked for bids to metallize thirteen pipe coils. Unless this type inquiry goes to a confident applicator, a failure is sure to occur."

The engineer or inspector should check the sprayed coating at regular intervals with either a G. E. or magnetic thickness gauge. He should also know the area involved and the amount of material to be sprayed to reach his desired thickness. Zinc, for instance, is normally figured for a .010 thickness of coating at one half pound of wire to the square foot. All metallizing should be done immediately after the cleaning operation be-

(Continued on next page)



This Xmas tree, in the Corpus Christi Bay area, has been metallized with the METCO System 105. Template has a 4-coat Vinyl coating.

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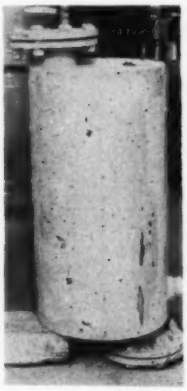

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fore any contamination can set upon the surface. In many cases only a few square feet of area is blasted and the metal immediately sprayed before moisture or any foreign matter can set upon the blasted surface.

Let us also keep in mind that sprayed metal is porous and the surface quite irregular. Every square inch of measured surface may have several square inches of zinc or aluminum exposed to the environment. With this in mind, many cases of sprayed metal are therefore sealed with organic coatings. We are asked if sprayed metal is so good, why do we have to seal or paint it? Here is the answer. "The combination of metallized zinc or aluminum with organic sealers provides the lowest yearly cost protection for most applications." The fact that organic materials must be compatable with the sprayed metal cannot be emphasized too strongly. There are far too many examples of failures because one concern applies the spraying and another applies the paint coating that should not be used. In many cases it is better to leave it bare.

Metallized zinc coatings may be called sprayed galvanizing. The coating of .003 thickness provides one and one half ounces per square foot of surface and compares with the average galvanizing job. Zinc being strongly anodic to steel will protect large voids when damaged. It is best used in the PH range of 8-12.

Speaking of ninety-nine percent purity, **not an alloy**, aluminum has been used in many cases where zinc would fail rapidly. Aluminum is best in the PH range of 2 to 3 and has excellent resistance to sea water and salt atmosphere. Sprayed aluminum, unlike sprayed zinc, is an excellent base for a wide variety of coatings. The life of the coating itself may be doubled or tripled. After the paint has finally failed, complete corrosion protection remains. Furthermore, the job of repainting is not complicated by the necessity of removing rust or scale.

Sprayed aluminum and a silicon base vehicle, containing aluminum pigment, has given excellent results for heat resistance applications. It has worked well on exhaust stacks, mufflers, inlet and outlet headers in cooling towers, and many other items where the elevated temperature does not exceed 900° Fahrenheit.

As stated earlier, metallizing can be a haphazard process, or done correctly as any other protective coating. Zinc, aluminum and other materials have been used with little knowledge

or care as to which one was proper for a specific job. With this in mind the Metallizing Engineering Company, along with the major metallizing contractors of the United States, have brought out a number of established procedures now known as the METCO Systems. At the present there are some twenty-one various established systems being used throughout the nation. These various systems, with their written specifications, cover industrial atmosphere, marine work, rural atmosphere, immersion in salt water and fresh water, applications for minimum cost, interiors of tanks, and for steel piling.

The microscopic surface porosity of sprayed metal provides the ideal base for many paints. It is firmly keyed to the zinc or aluminum that stays in place and in itself provides years of protection. When the Metcoseals finally weather away you still have the protection afforded by the pure zinc or aluminum, both anotic to steel and providing electro-chemical protection. Where appearance is a factor, the seal coats may be reapplied without descaling or other expensive preparation.

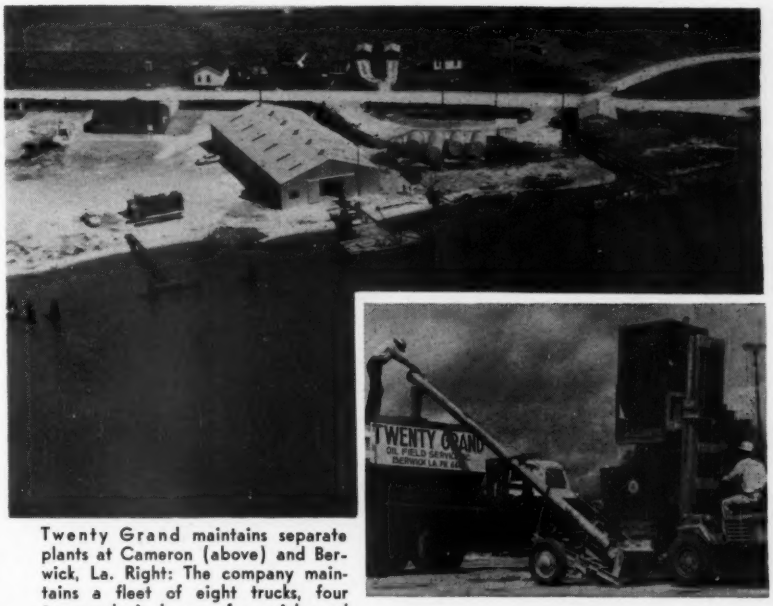
To give an idea as to the many applications of the METCO Systems, here are a few case histories of metallizing jobs on the Gulf Coast. In 1951 the METCO System 110 was used on a refinery flare stack. This stack being 250 feet in height and fabricated from 40 foot lengths of 16" pipe, the owner was unable to have the item galvanized. As an alternate metallizing was used. A .010 thickness, or three times the thickness of galvanizing, was used. Inspection in the latter part of 1954 showed no signs of failure. The same time that this particular job was done, two exhaust mufflers on large gas compressors were metallized with the METCO System 120. At the time of inspection, it was also found that the coating was in excellent shape.

In the early part of 1951 the offshore or bay drilling was in its infancy. However, many oil companies were trying to combat the corrosion problem of wellhead structures. These items being subjected to salt spray constantly were not only a maintenance problem, or an appearance problem, but more of a safety problem to stop corrosion. A pilot installation was then metallized with .010 of zinc with a sealer coat of heavy mastic. This was placed in Corpus Christi Bay in the latter part of 1951. Four years later an inspection was made of this installation and it was found to be completely free of any corrosion.

Since that time various metallized systems have been used, some being the METCO System and others being specified by company engineers. At present, over five production companies are using metallizing to combat this problem.

Another metallizing job of interest was the steel cruiser metallized from the water line down in 1952 with .010 of pure zinc. This boat, being used as a party boat, was in service approximately three days out of the week, the other four days the boat was normally in its berth at Freeport Harbor. After eighteen months of service the boat was dry docked and its owner found a minimum of barnacles and marine growth upon the zinc.

Realizing that we are unable to tell the complete story of the case histories and technical data now available on metallizing, we feel sure that these systems applied properly will give you more protection and cost less per square foot per year over a long period.



Twenty Grand maintains separate plants at Cameron (above) and Berwick, La. Right: The company maintains a fleet of eight trucks, four tugs and six barges for quick mud and chemical delivery anywhere in southern Louisiana.

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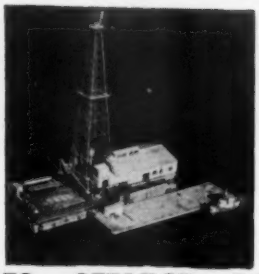

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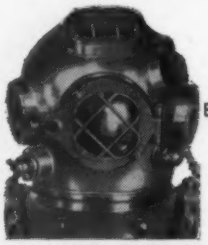

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OFFSHORE LOCATIONS

TEXAS

Calhoun County: Arkansas Fuel Oil Corp. 1 State Tract 100, Hynes Bay. Four miles SSW Seadrift. 8,500-foot test.

Chambers County: Humble Oil & Refining Co., C-47 Galveston Bay-State, Sec. 12-B. Fisher's Reef. Proposed depth: 10,000 feet.

Chambers County: Union Producing Co., 1 State Tract 37, Turtle Bay. Two miles NW Anahuac, one and one-half miles SSW Turtle Bay production. 8,900-foot test.

Chambers County: The Texas Company, 1 State Tract 134, Galveston Bay. Ten miles E Seabrook, one and one-half miles W of Smith's Point Field and two miles N of Red Fish Reef Field. Proposed depth: 11,000 feet.

Kleberg County: Standard Oil Co. of Texas, 22 State Tract 951, Gulf of Mexico. Thirty miles SW of Port Aransas. Proposed depth: 9,000 feet.

Matagorda County: Brazos Oil & Gas Co., 1 State of Texas "SA", Matagorda Bay Tract 204. Nine miles E Port O'Connor. 7,000-foot test.

Matagorda County: Brazos Oil & Gas Co., 1 State of Texas "KA" 35914, Matagorda Bay Tract 191. Fourteen miles SW Palacios, three miles SE Matagorda Bay gas area. Proposed depth: 6,200 feet.

Nueces County: The Atlantic Refining Co., 3 State Tract 426. Mustang Island. 7,450-foot test.

Nueces County: Humble Oil & Refining Co., 1 State Tract 772, Gulf of Mexico. Nine miles W Port Aransas. 12,500-foot test.

Nueces County: Renwar Oil Corp., 10 State Tract 460, Corpus Christi Bay. Fourteen miles E Corpus Christi. 7,650-foot test.

Nueces County: Sun Oil Co., 1 State Tract 786, Nueces Bay. Four and one-half miles N Corpus Christi. 9,800-foot test.

LOUISIANA

Iberia Parish: Magnolia Petroleum Co., 3-H State Lease 681, Block 89, Eugene Island Block 110. Proposed depth: 10,000-ft.

Iberia Parish: Pure Oil Co., 1-B State Lease 1079, Eugene Island Block 47. Kerr-McGee, Contractor. Proposed depth: 13,000-ft.

Jefferson Parish: Humble Oil & Refining Co., 1-H Humble-Shell-State Lease 796, Grand Isle. Proposed depth: 14,000-ft.

This is the heater treater wing of a Shell production platform off the coast of Louisiana. The tall vertical tank is a heater treater and breaks the water and oil down, separating the water from the oil.

La Fourche Parish: The California Co., 7-J State Lease 1367, Bay Marchand Block 2. Proposed depth: 5,225-ft.

Plaquemines Parish: The California Co., 6 State Lease 1277, Main Pass Block 69. Penrod Drilling Co., contractor. Proposed depth: 8,250-ft.

NPlaquemines Parish: The California Co., F-1 State Lease 1277, Main Pass Block 69. 8,400-foot test.

Plaquemines Parish: The California Co., 4 La. State Lease 2557, Main Pass Block 69. Proposed depth: 7,000-ft.

Plaquemines Parish: The California Co., 10 State Lease 1922. Proposed depth: 8,500-ft.

Plaquemines Parish: The California Co., 7-A State Lease 1958, Main Pass Block 35. Proposed depth: 7,700-ft. Re-drill of No. 27-1958 well, originally completed as gas well, will re-enter and sidetrack.

Plaquemines Parish: The California Co., 2 La. State 2548, Block 51. Wildcat. Proposed depth: 11,000-ft.

Plaquemines Parish: The California Co., 1 State Lease 2552, South Pass Block 40 area. Wildcat. Proposed depth: 13,000-ft.

Plaquemines Parish: The California Co., 1 State Lease 2227. Wildcat. Proposed depth: 12,000-ft.

Plaquemines Parish: Continental Oil Co., 2 State Lease 2124, Main Pass Block 25. Proposed depth: 6,500-ft.

Plaquemines Parish: Continental Oil Co., 1 State Lease 2512, Main Pass Block 25 area. Wildcat. Proposed depth: 6,500-ft.

Plaquemines Parish: Kerr-McGee Oil Industries, Inc., 1-A State Lease 1268, Main Pass Block 47 area. Phillips Petroleum Company, contractor. Wildcat. Proposed depth: 11,000-ft.

Plaquemines Parish: Shell Oil Co., 36 State Lease 1961, Main Pass Block 35. Proposed depth: 9,800-ft.

Plaquemines Parish: Shell Oil Co., 25 State Lease 1008. Rebstock & Reeves, contractor. Proposed depth: 8,200-ft.

Puaquemines Parish: Shell Oil Co., 1 State Lease 2675, South Pass Block 21 area. Five miles south of Garden Island Bay production. Wildcat. Proposed depth: 12,500-ft.

Puaquemines Parish: Shell-Texas-Humble-Placid, State Lease 2637, West Delta Block 2 area. Wildcat. Proposed depth: 14,000-ft.

St. Bernard Parish: Continental Oil Co., 1 State Lease 1944, Chandeleur Sound Block 71 area. Proposed depth: 10,000-ft.

St. Mary Parish: Magnolia Petroleum Co., I-2 State Lease 692, Block 120, Eugene Island Block 126 area. To be drilled directionally from existing platform I-1, State Lease 691. Proposed depth: 10,500-ft.

St. Mary Parish: Magnolia Petroleum Co., 7-H State Lease 691, Block 119, Eugene Island Block 126 area. Proposed depth: 6,100-ft.

Terrebonne Parish: Humble Oil & Refining Co., 2-A State Lease 1035, Block 54. Wildcat. Proposed depth: 9,000-ft.

Terrebonne Parish: Magnolia Petroleum Co., 1-B State Lease 788, Ship Shoal area. Wildcat. Proposed depth: 13,000-ft.

Terrebonne Parish: Magnolia Petroleum Co., 2-A State Lease 778, Block 113. Wildcat. Proposed depth: 7,500-ft.

Terrebonne Parish: Magnolia Petroleum Co., 1-C State Lease 794, South Pelto Block 20. Proposed depth: 13,000-ft.

Terrebonne Parish: Magnolia Petroleum Co., 1-D State Lease 792, Block 12, South Pelto area. Proposed depth: 11,500-ft.

OFFSHORE COMPLETIONS

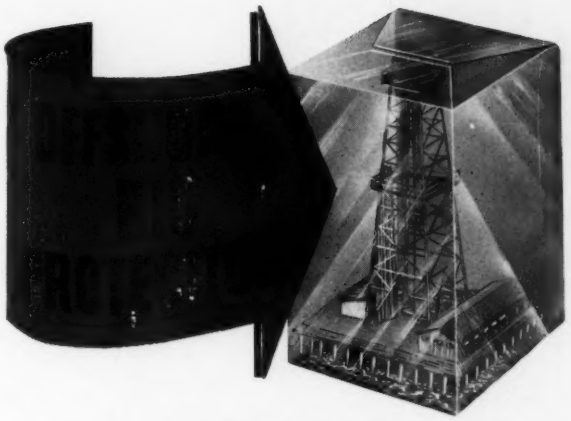
TEXAS

Chambers County: Humble Oil & Refining Company, A-65 Galveston Bay State, Section 246, Red Fish Reef. TD 9989 feet. Perf. 9459½-62½ feet, PT 112 BOPD on 10/64-inch choke. TP 380 lbs., GOR 911-1.

Chambers County: The Texas Company, 1 Trinity Bay State Tract 107. Discovery, Smith's Point (Frio). TD 11,532 feet, perf. 11,495-528 feet, PT 106.67 BOPD on 8/64-inch choke. Grav. 33.8, 42 percent water, TP 2000 lbs., GOR 2895-1.

Chambers County: Humble Oil & Refining Company, F-61 Galveston Bay State, Sec. 26-B. Trinity Bay (Dry Hole). TD 8400 feet, abandoned.

(Continued on next page)



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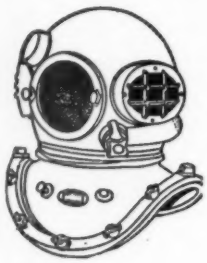

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OFFSHORE COMPLETIONS

Chambers County: The Texas Company, 1 State Tract 133, Galveston Bay. Wildcat. TD 10,500-ft., perf. 9800-01 feet. Dry hole. Abandoned.

Jefferson County: Magnolia Petroleum Company, A-2 Texas Gulf, Tract 9. Gulf of Mexico. TD 8439 Feet. PB 8270-ft., perf. 8265-68 feet, flowed 216 BOPD with 322 MCFG in 53 hours. GOR 1498-1. Squ.; perf. 8247-57 feet, tested 6350 MCFGD and some distillate. PT 38,000,000 CFGD open.

Kleberg County: Standard Oil Company of Texas, 42 State Tract 949, Gulf of Mexico. Chevron. Holmes, contractor. TD 9000 feet, perf. 7966-72 feet, sw, squ.; re-perf. 7954-60 feet, oil and sw; squ.; re-perf. 7954-56 feet, gas and dist. on 1/4-inch and 1/8-inch chokes. Perf. 7918-30 feet and 7946-56 feet, 2000 MCFGD plus 19 bbls. dist. on 12/64-inch choke. Grav. 51, TP 2400 lbs. SI.

Nueces County: Atlantic Refining Company, 5 State Tract 415, Corpus Christi Bay. Red Fish Bay (Oil Well). TD 8484 feet. PT 60.36 BOD, GOR 1280-1, Grav. 41.8, from perf. at 8274-78 feet.

LOUISIANA

Cameron Parish: Continental Oil Company, 1-B State Lease 1626. Wildcat. Junked hole. Nicklos Drilling Company, contractor. TD 11,761 feet. Hit salt water sand, hole bridged and stuck drill pipe. Unable to recover pipe, PB and ST to drill 2-B hole.

Iberia Parish: Magnolia Petroleum Company, H-2 State Lease 681, Block 89, Eugene Island Block 110 area. Dry hole. TD 10,500 feet.

Jefferson Parish: Humble Oil & Refining Company, 1 State Lease 803, Grand Isle Block 16. TD 5303 feet. Dry hole.

Jefferson Parish: Humble Oil & Refining Company, 6-E State Lease 797, Grand Isle Block, 18. Dual oil well. TD 10,716 feet. L/Zone - T/Pay 8820 feet, perf. 8820-50 feet, IPF 66.69 BOD and 104,900 CFGD on 1/8-inch choke, TP 850 lbs., GOR 1573-1. 40.7 Grav. U/Zone - T/Pay 8070 feet, perf. 8070-82 feet, IPF 192.52 BOD and 116,000 CFGD on 1/8-inch choke. GOR 616-1, 35.5 Grav.

A helicopter rides high above the water on the fantail of MR. GUS, as the giant drill barge is towed to a location off the Texas coast.

Lafourche Parish: The California Company, 3-J La. State 1367, Block 3, Marchand Block 2. Oil well. Noble Drilling Company, contractor. TD 5719 feet, perf. 5450-62 feet, IPF 184 BOD with 35,000 CFGD, gas lift. Grav. 32.1, GOR 390-1.

Lafourche Parish: The California Company, J-4 State Lease 1365, Block 3, Bay Marchand Block 2, Noble Drilling Co., contractor. Oil well. TD 6314 feet, perf. 5158-85 feet, IPF 180 BOD on gas lift. Grav. 39.8, GOR nil.

Plaquemines Parish: Shell Oil Company, 21 State Lease 998, South Pass Block 24, Kerr-McGee, contractor. Oil well. TD 9600 feet, perf. 7887-97 feet, IPF 230 BOPD and 94 MCFGD on 10/64-inch choke. GOR 408-1.

Plaquemines Parish: Shell Oil Company, 26 State Lease 1961, Main Pass Block 35. Oil well. TD 9907 feet, perf. 6677-83 feet, IPF 163 BOD on 8/64-inch choke. Grav. 32, TP 800 lbs., GOR 361-1.

Plaquemines Parish: The California Company, 7-D State Lease 1278, Main Pass Block 69. Noble Drilling Co., contractor. TD 8700 feet. Perf. 7730-41, 7746-49 feet, made dry gas. SI.

Puaquemines Parish: Humble Oil & Refining Company, 8 State Lease 2090, Southeast Pass. TD 8503 feet. Perf. 8122-38 feet, IPF 162 BOPD and 113 MCGD on 1/8-inch choke. GOR 697-1.

Plaquemines Parish: Kerr-McGee Oil Industries, Inc., 1-F State Lease 1999, Breton Sound Block 20 area. Oil discovery. Phillips rig. TD 6200 feet, perf. 5846-57 feet, IPF 240 BOD on 10/64-inch choke. GOR 600-1.

Plaquemines Parish: The California Company, 5 State Lease 1277, Main Pass Block 69, Penrod Drilling Co., contractor. Oil well. TD 8300 feet, perf. 8156-76 feet, IPF 250 BOD on 9/64-inch choke. GOR 580-1.

Plaquemines Parish: Humble Oil & Refining Company, 1-G State Lease 819, West Delta Block 30 area. Shut in gas well. TD 11,042 feet, perf. 10,852-78 feet, flowed est. 417,800 CFGD on 3/16-inch choke and SI.

St. Mary Parish: Magnolia Petroleum Company, 1-A State Lease 695, Eugene Island Block 126 area. Oil well. TD 11,030 feet, perf. 9558-60 feet, ran DST, perf. 10-110-16 feet, flowed 132 BOPD on 12/64-inch choke, GOR 1141-1.

St. Mary Parish: Shell Oil Company, 2 State Lease 1536, Eugene Island Block 18, shut in gas well. TD 10,500 feet, perf. 9347-52 feet, no gauge.

St. Mary Parish: Shell Oil Company, 4 State Lease 1667, Eugene Island Block 18. Shut in gas well. TD 10,485 feet, perf. 9354-58 feet. Did not test.

St. Mary Parish: Pure Oil Company, 1 State Lease 2043, wildcat. Dry hole. Drilled to 13,500 feet, stuck drill pipe, PB and S/T drilled to 13,519 feet STH, well kicked and stuck drill pipe, 13,484 feet, PB and S/T 12,962 feet. TD 2nd STH 13,547 feet. Abandoned.

Terrebonne Parish: Standolind Oil & Gas Company, 1-A State Lease 758, Block 39 Ship Shoal area. Wildcat, dry hole. TD 7998 feet, abandoned.

Terrebonne Parish: Humble Oil & Refining Company, 1-A State Lease 1035, South Timbalier area. Wildcat oil discovery. TD 11,831 feet, perf. 6591-6605 feet, IPF 420.88 BOD and 204,300 CFGD on 1/8-inch choke, GOR 485-1.

Terrebonne Parish: Gulf Refining Company, 1-A State Lease 0419, Ship Shoal Block 150 area, directional hole drilled from 1 O.C.S. 0419 (dry hole at 9000 feet). 12,000-ft. test. Re-entered 4-8-55, OTD 9000 feet, PB 2950 feet and ST, stuck DP in STH at 12,265 feet. Deviated hole, stuck drill pipe. Junked 6-4-55.

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The Slush Pit...

A young lady oyster had just returned from her first date with a lobster and was telling her oyster girl friends about it.

"He was simply marvelous," she said. "First he looked deep into my eyes. Then he put his arms around me. Then he . . . ."

A look of horror came over her as she clutched her throat and cried: "Heavens! My pearls!"

The young woman, single, was knitting some little garments, and her mother said to a neighbor: "I'm glad she's finally getting interested in something other than running around with boys!"

The wire-line operator is a Scot. The minute he gets ashore he always calls his girl to see what night she's free.

The young lady, after several years absence from a certain city, moved back to her old haunts. She had lost contact with most of her former friends, and there was one young man in particular she wanted to locate. She had called him "Honey Bun," and about all she could remember was that his last name was Jones. But he had been a lot of fun, and after a few days she recalled that he had worked in a packing plant. She therefore made the rounds of the packing plants in the city.

At the first packing plant, the foreman informed her there were no less than twenty-two Joneses on the payroll.

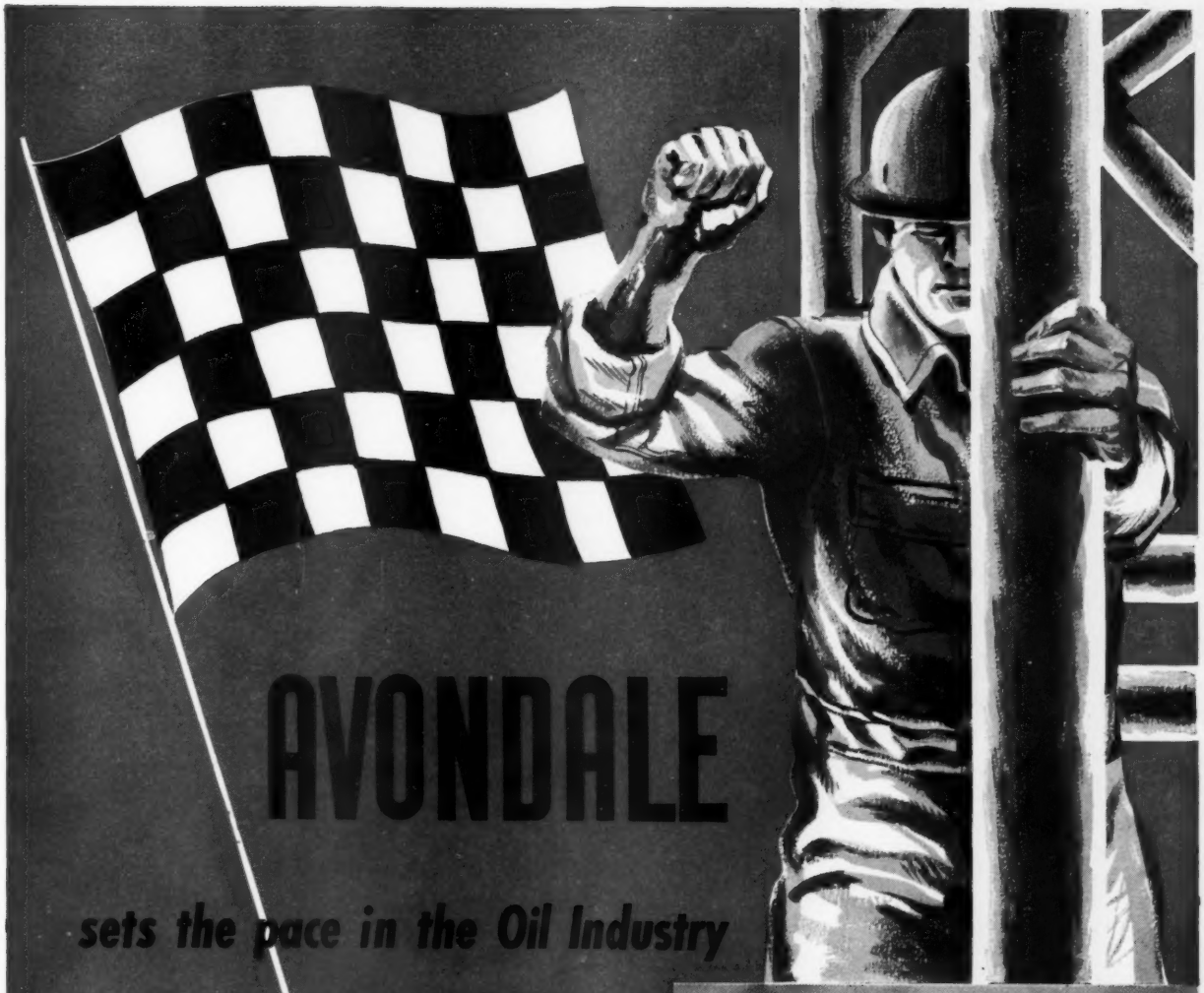
"If you could remember something more specific," he told her, "perhaps I could help you." He ran his finger down the list. "For instance, do you know what department he worked in?"

"Poultry, I think," said the young lady hesitantly.

"Well, we have eight Joneses in that department," answered the foreman. "Perhaps we can narrow it down even more. Was he a pheasant plucker?"

"Oh, yes!" cried the young lady, enthusiastically. "And he danced divinely!"

"Now I'll give you a ticket"



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